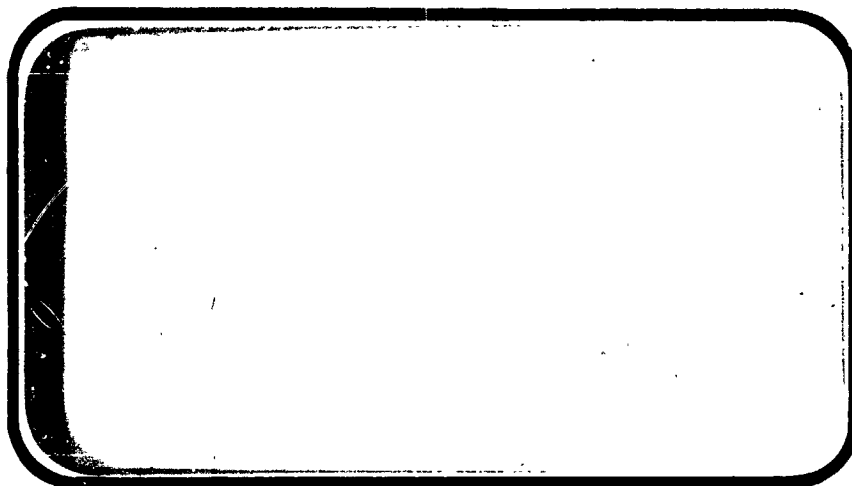




NASA

# NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



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ON A 0.015 SCALE MODEL SPACE SHUTTLE  
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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

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DATA MANAGEMENT services

SPACE DIVISION



CHRYSLER  
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EFFECTS OF REACTION CONTROL SYSTEM JET-FLOW FIELD  
INTERACTIONS ON A 0.015 SCALE MODEL SPACE SHUTTLE  
ORBITER AERODYNAMIC CHARACTERISTICS

By

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Prepared under NASA Contract Number NAS9-13247

by

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for

Engineering Analysis Division

Johnson Space Center  
National Aeronautics and Space Administration  
Houston, Texas

WIND TUNNEL TEST SPECIFICS

Test Number: LaRC UPWT 1031  
NASA Series No.: MA-7  
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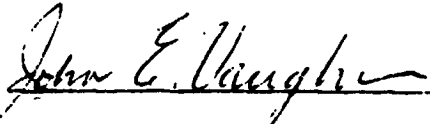

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EFFECTS OF REACTION CONTROL SYSTEM JET-FLOW  
FIELD INTERACTIONS ON A 0.015 SCALE MODEL SPACE  
SHUTTLE ORBITER AERODYNAMIC CHARACTERISTICS

By

William J. Monte\* and J. R. Rausch\*\*

SUMMARY

This report presents results from an experimental program sponsored by NASA-Johnson Space Center on the effects of the Reaction Control System (RCS) jet-flow field interactions on the Space Shuttle orbiter system during entry. The primary objective of the test program was to obtain data for the Rockwell International Preliminary Requires Review (PRR) shuttle orbiter configuration to determine control amplification factors resulting from jet interaction between the RCS plumes and the external flow over the vehicle. A secondary objective was to provide data for comparison and improvement of analytic jet interaction prediction techniques.

To accomplish the objectives, testing was conducted by General Dynamics Convair Aerospace Division in the NASA Langley Research Center 4 x 4-Ft Unitary Wind Tunnel on an 0.015 Scale Model of the Rockwell PRR Configuration. Tests were made at Mach numbers of 2.5, 3.0 and 4.0 over a Reynolds number per foot range of 3.0 to 5.0 million. The model was pitched through an angle-of-attack range of 0 to 20 degrees with angles-of-sideslip of 0 and +5 degrees.

\*NASA/LaRC  
\*\*CD/C



The test program in the 4 x 4-Ft Unitary Wind Tunnel was divided into two phases; (1) force and moment measurements were made with and without RCS blowing, investigating environment parameters ( $Re$ ,  $\alpha$ ,  $\beta$ ), RCS plume parameters (Jet pressure ratio, momentum ratio and thrust level), and geometry parameters (RCS pod locations) on the orbiter model, (2) oil flow visualization tests were conducted on a dummy balance at the end of the test. Only the results of phase 1 testing are included in this report.

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## Plotted Coefficient Schedule

- A) CN, CL, CLM, CA, CD, CY, CYN, CLN, CBL, CSL vs ALPHA
- B) ΔCN, ΔCL, ΔCLM, ΔCA, ΔCD, ΔCY, ΔCYN, ΔCLN, ΔCBL, ΔCSL vs ALPHA

NOMENCLATURE  
General

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
$a$		speed of sound; m/sec, ft/sec
$C_p$	CP	pressure coefficient; $(p_l - p_\infty)/q$
$M$	MACH	Mach number; $V/a$
$p$		pressure; $N/m^2$ , psf
$q$	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$ , $N/m^2$ , psf
$RN/L$	RN/L	unit Reynolds number; per m, per ft
$V$		velocity; m/sec, ft/sec
$\alpha$	ALPHA	angle of attack, degrees
$\beta$	BETA	angle of sideslip, degrees
$\psi$	PSI	angle of yaw, degrees
$\phi$	PHI	angle of roll, degrees
$\rho$		mass density; $kg/m^3$ , slugs/ft <sup>3</sup>

Reference & C.G. Definitions

$A_b$		base area; $m^2$ , $ft^2$
$b$	BREF	wing span or reference span; m, ft
c.g.		center of gravity
$\frac{l_{REF}}{c}$	LREF	reference length or wing mean aerodynamic chord; m, ft
$S$	SREF	wing area or reference area; $m^2$ , $ft^2$
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

$b$	base
$l$	local
$s$	static conditions
$t$	total conditions
$\infty$	free stream

# NOMENCLATURE (Continued)

## Body-Axis System

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
$C_N$	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
$C_A$	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
$C_Y$	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
$C_{A_b}$	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_h - p_w)/qS$
$C_{A_f}$	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
$C_m$	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS_{REF}}$
$C_n$	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS_b}$
$C_l$	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS_b}$

## Stability-Axis System

$C_L$	CL	lift coefficient; $\frac{\text{lift}}{qS}$
$C_D$	CD	drag coefficient; $\frac{\text{drag}}{qS}$
$C_{D_b}$	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
$C_{D_f}$	CDf	forebody drag coefficient; $C_D - C_{D_b}$
$C_Y$	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
$C_m$	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS_{REF}}$
$C_n$	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS_b}$
$C_l$	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS_b}$
L/D	L/D	lift-to-drag ratio; $C_L/C_D$

NOMENCLATURE

ADDITIONS TO STANDARD LIST

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
$P_{oj}$	PO-JET	total pressure in model RCS nozzle chamber, psi
$A/A^*$		nozzle exit to throat area ratio.

## CONFIGURATIONS INVESTIGATED

General Dynamics/Convair furnished an 0.015 scale model of the space shuttle PRR orbiter configuration which is shown in Figure 2. The model was cast and fabricated from 17-4 PH stainless steel using the PRR configuration design furnished by Rockwell International. Two left hand OMS pods were made; one from steel for the force tests and the other with a RTV covering for heat transfer tests. The RTV OMS pod had a white grid on the surface to assist in data reduction. In addition, one yaw nozzle configuration was covered with RTV for heat transfer tests with thrust. Only the force test configurations were used in this test.

The principal RCS locations tested are the yaw and roll thrusters located on the OMS pods near the base of the vehicle.

### ORBITER MODEL

Figure 4 presents a cut-away of the orbiter model while Figures 5 to 7 present close-up photographs showing model details. The model consists of the following parts:

- a. removable nose
- b. fuselage afterbody
- c. lower fuselage afterbody for wing-off
- d. lower-aft fuselage cover (heat shield/cover)
- e. fuselage afterbody fairings
- f. OMS pods
- g. vertical tail



- h. tail-off block
- i. wing
- j wing tip dummy RCS pod
- k. balance adapter for the 6-component balance
- l. non-metric RCS plenum and supply line
- m. several nozzle configurations

All model parts are cast or machined from 17 PH stainless steel.

As shown in the Figure 4, the RCS engines are not mounted on the wind tunnel balance so that all that is measured is the basic configuration forces and moment and the resulting changes in these data from interactions caused by RCS operation.

#### NOZZLE CONFIGURATIONS

Figure 8 gives the details of the nozzle configurations furnished with the model. The nozzles are conical with a circular throat section.

The nozzle configurations available include:

- a. Twin nozzle yaw configuration having an expansion ratio of 2.72,  $N_1$  (-33 part)
- b. Twin nozzle yaw configuration having an expansion ratio of 1.61,  $N_2$  (-35 part)
- c. Twin nozzle yaw configuration having an expansion ratio of 1.91,  $N_3$  (-37 part)
- d. Single nozzle yaw configuration having an equivalent nozzle area as (a) above with an expansion ratio of 2.72  $N_5$  (-39 part)

- e. Twin nozzle roll configuration left hand side exhausting downward having an expansion ratio of 2.72,  $N_{40}$  (-29 part)
- f. Twin nozzle roll configuration right hand side exhausting upward having an expansion ratio of 2.72,  $N_{41}$  (-31 part).  $N_4$  represents both  $N_{40}$  and  $N_{41}$ .

The twin nozzle configurations are 1.5 exit diameters apart and are mounted as shown in Figure 9.

The nozzle configurations are designed to plug into the RCS plenum using an "O" ring as a seal. One dummy RCS pod is also furnished (-43) for sealing one side of the plenum as required. The roll RCS pod configurations are designed to be used individually or together.

Only the  $N_1$ ,  $N_4$ ,  $N_{40}$  and  $N_{41}$  nozzles (model parts -33, -29 and -31) were used in this test.

#### RCS ENGINE SIMULATION

The RCS engine simulated in this study is a hydrazine monopropellant rocket engine with the following full-scale characteristics:

1) chamber conditions

$$T_c = 2000^\circ\text{F}$$

$$p_c = 157 \text{ psia}$$

2) nozzle

80% bell

$$A/A^* = 20$$

exit diameter = 9.5 inches

3) thrust = 1110 lbs (vacuum)

The Reactor Control System used during entry consists of two yaw control engines and two roll control engines per side of the vehicle.

The reference entry trajectory used to establish the environmental conditions is the Rockwell International nominal guided entry trajectory (Trajectory Number 2007).

The baseline nozzle characteristics were combined with the reference trajectory using an isentropic expansion to define nozzle exit conditions to derive the nozzle flow parameter variation during entry. These parameters include:

1. nozzle exit static pressure ratio
2. nozzle thrust coefficient
3. nozzle momentum ratio
4. nozzle thrust ratio
5. nozzle mass flow ratio
6. nozzle temperature ratio
7. Herron's plume parameter

Reference 1 defines the values for the above parameters.

The nozzle ratios (thrust, momentum, mass flow, and temperature) were determined from the expressions given by Pindzola in reference 2 while Herron's parameter was defined in reference 3.

In order to determine the scaled nozzles which matched these parameters, the wind tunnel ambient conditions were obtained for the test Mach numbers and Reynolds numbers and the properties of the auxiliary air were assumed ( $R$ ,  $T_{\text{supply}}$ ).

C

The scaled nozzle expansion ratio and supply pressures were calculated to match both nozzle exit pressure ratio and thrust coefficient simultaneously for a given test gas and a given test condition. One matched nozzle was determined for each test gas (air or helium). Matching thrust coefficient and pressure ratio for these nozzles results in matching momentum ratio and thrust ratio but not mass flow ratio. The remaining nozzle parameters were computed at the other test conditions for each matched nozzle. A third nozzle was then sized for air as the test gas, matching full scale mass flow ratio and pressure ratio. A fourth nozzle, designed the same as the air nozzles (matching pressure ratio and thrust coefficient), was sized to have the throat area of two nozzles. This nozzle was used, in place of the two nozzle set, to determine if the analytic approach using a single equivalent nozzle to represent closely spaced nozzles is realistic.

The parameters for all these nozzles were computed at all test conditions. The run schedule was set up to obtain the greatest variation in parameters available for a given set of nozzles. Only the nozzles matched for air as the test gas were used in this test.

## TEST FACILITY DESCRIPTION

The NASA LRC 4 foot Unitary Plan Wind Tunnel (UPWT) is a closed-circuit, continuous flow, variable density facility. The test section is 4 feet by 4 feet by 7 feet long.

Two tunnel legs are available for supersonic testing in the Mach number ranges 1.47 to 2.86 (Leg No. 1) and 2.29 to 4.63 (Leg No. 2). Both tunnel legs were used for this test. An asymmetric, sliding block nozzle position and total pressure setting provide the test Mach numbers at a specified Reynolds number. Reynolds number can be varied from 0.76 to 7.78 million per foot. Available stagnation pressure variation is 4.0 to 142. psia. Dynamic pressure variation is 95. to 1260. psf with normal operating stagnation temperature about 150°F in Mach modes 2 or 3 and about 175°F in Mach mode 4. The tunnel is equipped with a dry air supply, an evacuating system, and a cooling system. The facility power is approximately 83,000 horsepower.

Model mounting provisions consist of various sting arrangements, including axial (longitudinal), lateral (independent pitch and yaw), and roll movement with side wall support. A Schlieren system and oil flow visualization equipment are available. Data are recorded at the tunnel and reduced off-line at the Langley Computer Center. The tunnel is used for force and moment, pressure, and dynamic stability tests. Hot and cold jet effects and heat transfer have been studied in the UPWT.

## DATA REDUCTION

The measured forces and moments from the balance were reduced to aerodynamic coefficients using the standard reduction equations in both stability and body axis with the following reference area and lengths.

$$S_{\text{ref}} = 0.7245 \text{ ft}^2$$

$$b_{\text{ref}} = 15.1152 \text{ inches (lateral-directional reference length)}$$

$$\bar{c}(\text{MAC}) = 7.8828 \text{ inches (longitudinal reference length)}$$

In the addition the moments are about a moment reference center (MRC) as shown in Figure 9.

Model Station 12.951

Model Water Line 6.000

All data have been corrected for deflection of the sting and balance due to aerodynamic loads. Corrections have also been made for flow angularity of the test section as determined from existing flow calibrations. No correction has been made to pitching moment to account for flow curvature, however. Model cavity pressure was measured with static orifices located in the vicinity of the balance, but model base pressure was not measured. No adjustment was made to axial force or drag data for cavity nor base pressure.

In addition to the normal aerodynamic coefficients incremental coefficient values between jet-on and jet-off runs were computed so that interaction increments are also presented as functions of angle of attack and yaw.

$$\Delta C_N = (C_{N_{jet \text{ on}}} - C_{N_{jet \text{ off}}})$$

$$\Delta C_m = (C_{m_{jet \text{ on}}} - C_{m_{jet \text{ off}}})$$

$$\Delta C_Y = (C_{Y_{jet \text{ on}}} - C_{Y_{jet \text{ off}}})$$

$$\Delta C_n = (C_{n_{jet \text{ on}}} - C_{n_{jet \text{ off}}})$$

$$\Delta C_\ell = (C_{\ell_{jet \text{ on}}} - C_{\ell_{jet \text{ off}}})$$

It should be pointed out that the test utilized yaw jets on the port side which generated negative yawing moments and positive side forces, while the roll jets generated positive (right wing down) rolling moments.

Calibration tests were performed in a vacuum chamber at Convair Aerospace Division from March 26 to 28, 1973 in order to establish the nozzle thrust and mass flow as functions of nozzle plenum pressure.

The nozzle assemblies were mounted on a single component strain gage force balance in a 5 foot diameter vacuum chamber to obtain direct measurement of thrust of each nozzle block.

The mass flow data was computed by measuring the pressure drop across an orifice plate for which the constants had been determined by prior calibrations. Calibration runs were made both at 5 psia and 3 psia pressures in the vacuum chamber using dry Nitrogen as the test gas for all nozzles and additional helium as the test gas for one nozzle. The measured nozzle thrust data were then corrected to vacuum conditions. The results of these calibrations are presented in Reference 1.

## REFERENCES

1. Rausch, J. R. and Carter, W. V., "Pre-Test Report, Wind Tunnel Tests of a 0.015 Scale Space Shuttle Orbiter Model in the NASA-LRC 4 x 4-Ft Unitary Wind Tunnel to Determine Effects of RCS Jet-Flow Field Interactions on the Aerodynamic Characteristics," GD/C Aero Tech Note TN-73-AE-07.
2. Pindzola, M., "Jet Simulation in Ground Test Facilities," AGARDograph 79, Nov. 1963.
3. Herron, R.D., "Investigation of Jet Boundary Simulation Parameters for Underexpanded Jets in a Quiescent Atmosphere," AEDC Report AEDC-TR-68-108, Sept. 1968.
4. Fournier, R., Spencer B., Jr., "Aerodynamic Stability and Control Characteristics of a 0.01925 Scale Model NR-ATP Orbiter at Mach Numbers from 1.9 to 4.63" NASA Langley Research Center Space Shuttle Report DMS-DR-2001, Nov. 1972.



O

Q

TABLE II.  
 (HPWT 1031(MA-7) DATA SET/RUN NUMBER  
 INFORMATION SUMMARY

☐ PRETEST  
☒ POSTTEST

SHEET 1

TEST RUN NUMBER	CONFIGURATION	SCHED	P <sub>0</sub>	P <sub>0</sub> / RPM	M/C	NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)	TEST RUN NUMBER
01	BTN <sub>1</sub>	B	0	37	1.0	2.5 2.95 4.0	81
02				328			79
03				600			80
04	BTN <sub>40</sub>			0			73
05				37			74
06				100			75
07				199			76
08				328			77
09				600			78
10	BWN <sub>41</sub>			0			67
11				37			68
12				100			69
13				199			70
14				328			71
15				600			72
16	BWTN <sub>1</sub>	A	0	0	3.0	15 19	
17				-5	0	18	
18				0	187	16	
19				-5	187	17	
20				0	157	20	

A) 0° → 20°  
 B) 12° → 35°  
 C) 12° → 25°

0 or 6  
 SCHEDULE

NASA-MSFC-MAF

TABLE II. (Continued)

UFWT 1031

COMPUTATION SUMMARY

PREPARED

X PD

SHEET 2

DATA SET IDENTIFIER	CONFIGURATION	SCHD.	PARAMETER	NO. of PPD	N	ALTER	2.5	2.95	4.0	1	8	7	11	13	2	12	14	3	4	5	9	6	912	10	37	39	40	38	830
RPM021	BWTN1	B	0	0	1.0																								
22		T	-25	0																									
23		T	-50	0																									
24		T	0	0	3.0																								
25		C	0	0	5.0																								
26		B	0	35	1.0																								
27		B	0	100	3.0																								
28		C	0	170	5.0																								
29		B	0	180	1.0																								
30		T	0	310	1.0																								
31			5																										
32			-25																										
33			-50																										
34			0	537	3.0																								
35			0	600	1.0																								
36	BWTN4	A	0	0	3.0																								
37			0	151																									
38		T	0	185																									
39		T	0	D	1.0																								

D)  $P_{ij} = 0 \rightarrow 600$  PSI

6 or 8  
SCIN DOLES

NASA-HSFC-4

TABLE II. (CONTINUED)  
 TEST UPWT 1031 DATA SET/RUN NUMBER  
 COLLATION SUMMARY

☐ PRETEST  
☒ POSTTEST

SHEET 3

DATA SET IDENTIFIER		CONFIGURATION	SCHD.		PARAMETERS/VALUES		NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)				TEST RUN NUMBER																
			A	B	P <sub>1</sub>	P <sub>2</sub>	RMA																					
RM040		<u>BWNTN4</u>	B	0	0	0	1.0		2.5	2.95	4.0																	
41			T	-25			T				26																	
42				-50							34																	
43			T	0			3.0				31																	
44			C	T			5.0				21																	
45			B				37	1.0			24																	
46			B				99	1.0			27																	
47			B				103	3.0			35																	
48			C				170	5.0			22																	
49			B				199	1.0			25																	
50							328				28																	
51				-25							29																	
52				-50							33																	
53				0			559	3.0			32																	
54			T	0			600	1.0			23																	
55		<u>BWNTN40</u>	A	0	0	0	3.0				41	43																
56			A	0	151	3.0						44																
57			A	0	198	3.0					42																	

0 or B  
 SCHEDULES

NASA-MSFC-WAF

TABLE II. (Concluded)

TEST UPWT 1031 DATA SET/RUN NUMBER

COLLATION SUMMARY

☐ PRETEST☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES			NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)				TEST RUN NUMBERS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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 6 OF 6  
 SCHEDULES

NASA-MSFC-MAF

TABLE III. MODEL COMPONENT DIMENSIONS

MODEL COMPONENT: N<sub>1</sub>

GENERAL DESCRIPTION: Reaction Control System Yaw Nozzles N<sub>1</sub> Scaled  
for Air as Test Gas

\_\_\_\_\_

\_\_\_\_\_

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL-SCALE</u>
NUMBER OF NOZZLES	<u>2</u>	<u>2</u>
EXPANSION RATIO	<u>20</u>	<u>7.37</u>
EXIT DIA.	<u>9.5"</u>	<u>0.146"</u>
EXIT ANGLE	<u>8°</u>	<u>15°</u>
LOCATION		LEFT SIDE ONLY
X STA	_____	<u>23.913"</u>
Y STA	_____	<u>2.195</u>
Z STA	_____	<u>7.123</u>
GAS	<u>N<sub>2</sub>H<sub>4</sub></u>	<u>Air</u>

TABLE III. MODEL COMPONENT DIMENSIONS (Continued)

MODEL COMPONENT: N<sub>4</sub>

GENERAL DESCRIPTION: Reaction Control System Roll Nozzles - Roll Right  
(Left Thruster Exhausts Toward Wing, Right Nozzle Past Vertical Fin)

\_\_\_\_\_

\_\_\_\_\_

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL-SCALE</u>
NUMBER OF NOZZLES	<u>4</u>	<u>4 (2 left, 2 right)</u>
EXPANSION RATIO	<u>20</u>	<u>7.37</u>
EXIT DIA.	<u>9.5"</u>	<u>0.0146</u>
EXIT ANGLE	<u>8°</u>	<u>15°</u>
LOCATION		Right Wing Down Roll Only
X STA	<u>                    </u>	<u>23.775</u>
Y STA	<u>                    </u>	<u>1.750</u>
Z STA	<u>                    </u>	<u>7.686 &amp; 5.561</u>
GAS	<u>N<sub>2</sub>H<sub>4</sub></u>	<u>Air</u>

TABLE III. MODEL COMPONENT DIMENSIONS (Continued)

MODEL COMPONENT: N40

GENERAL DESCRIPTION: Reaction Control System Left Side Pitch/Roll

Nozzles Exhausting Toward Wing

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL-SCALE</u>
NUMBER OF NOZZLES	<u>2</u>	<u>2</u>
EXPANSION RATIO	<u>20</u>	<u>7.37</u>
EXIT DIA.	<u>9.5</u>	<u>0.146</u>
EXIT ANGLE	<u>8°</u>	<u>15°</u>
LOCATION		Left Side
X STA	<u>          </u>	Exhausting Down
Y STA	<u>          </u>	<u>23.775</u>
Z STA	<u>          </u>	<u>1.75</u>
GAS	<u>          </u>	<u>5.561</u>
		<u>          </u>



TABLE III. MODEL COMPONENT DIMENSIONS (Concluded)

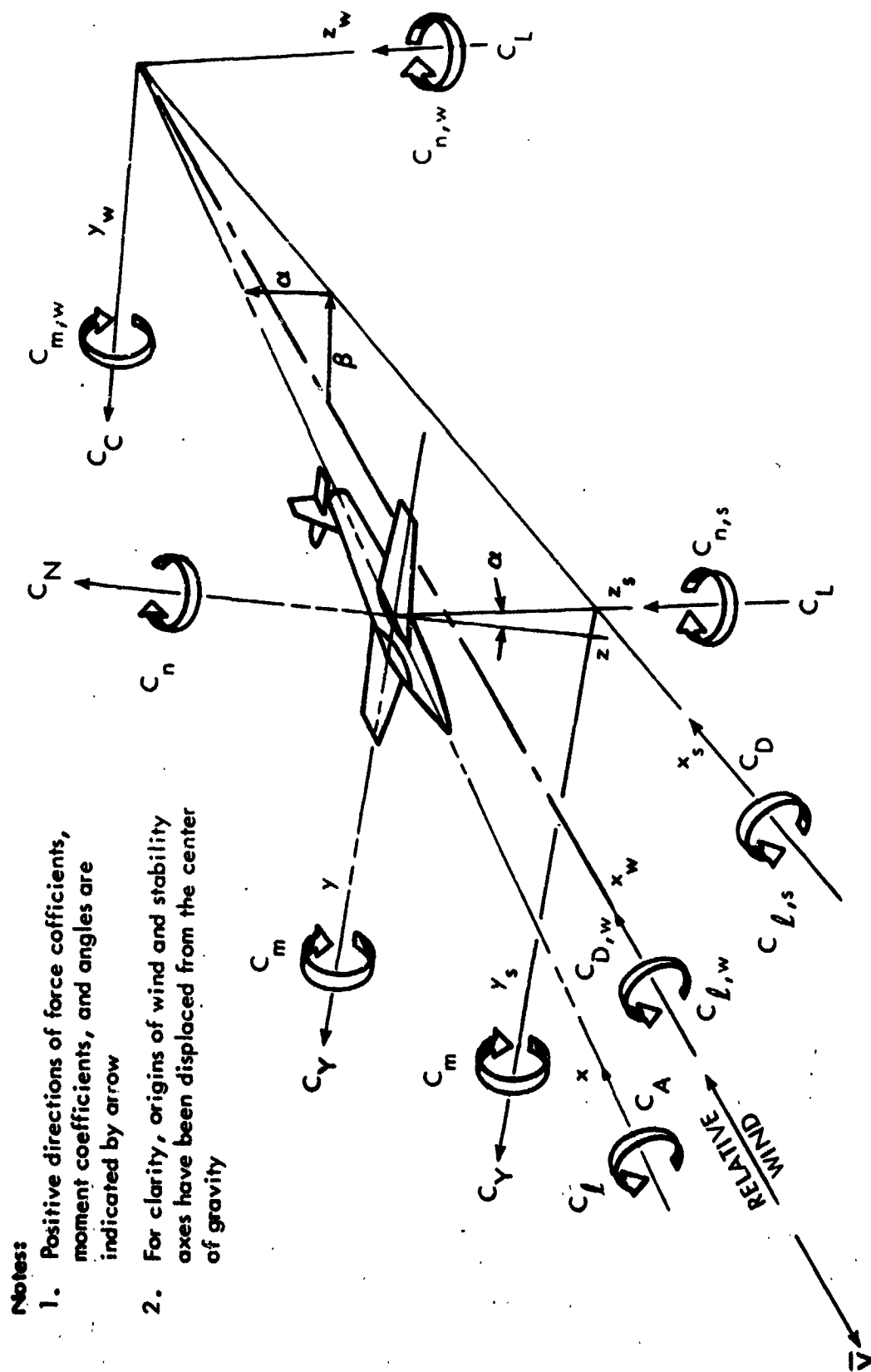
MODEL COMPONENT: N<sub>41</sub>

GENERAL DESCRIPTION: Reaction Control System Right Side Pitch/Roll

Nozzles Firing Upward Past Vertical Fin

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL-SCALE</u>
NUMBER OF NOZZLES	<u>2</u>	<u>2</u>
EXPANSION RATIO	<u>20</u>	<u>7.37</u>
EXIT DIA.	<u>9.5</u>	<u>0.146</u>
EXIT ANGLE	<u>8°</u>	<u>15°</u>
LOCATION		Right Side
X STA	<u>                    </u>	Exhausting Up
Y STA	<u>                    </u>	<u>23.775</u>
Z STA	<u>                    </u>	<u>1.75</u>
GAS	<u>                    </u>	<u>7.686</u>
	<u>                    </u>	<u>                    </u>



**Notes:**

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrow
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

Figure 1. Axis Systems

STA 22.925

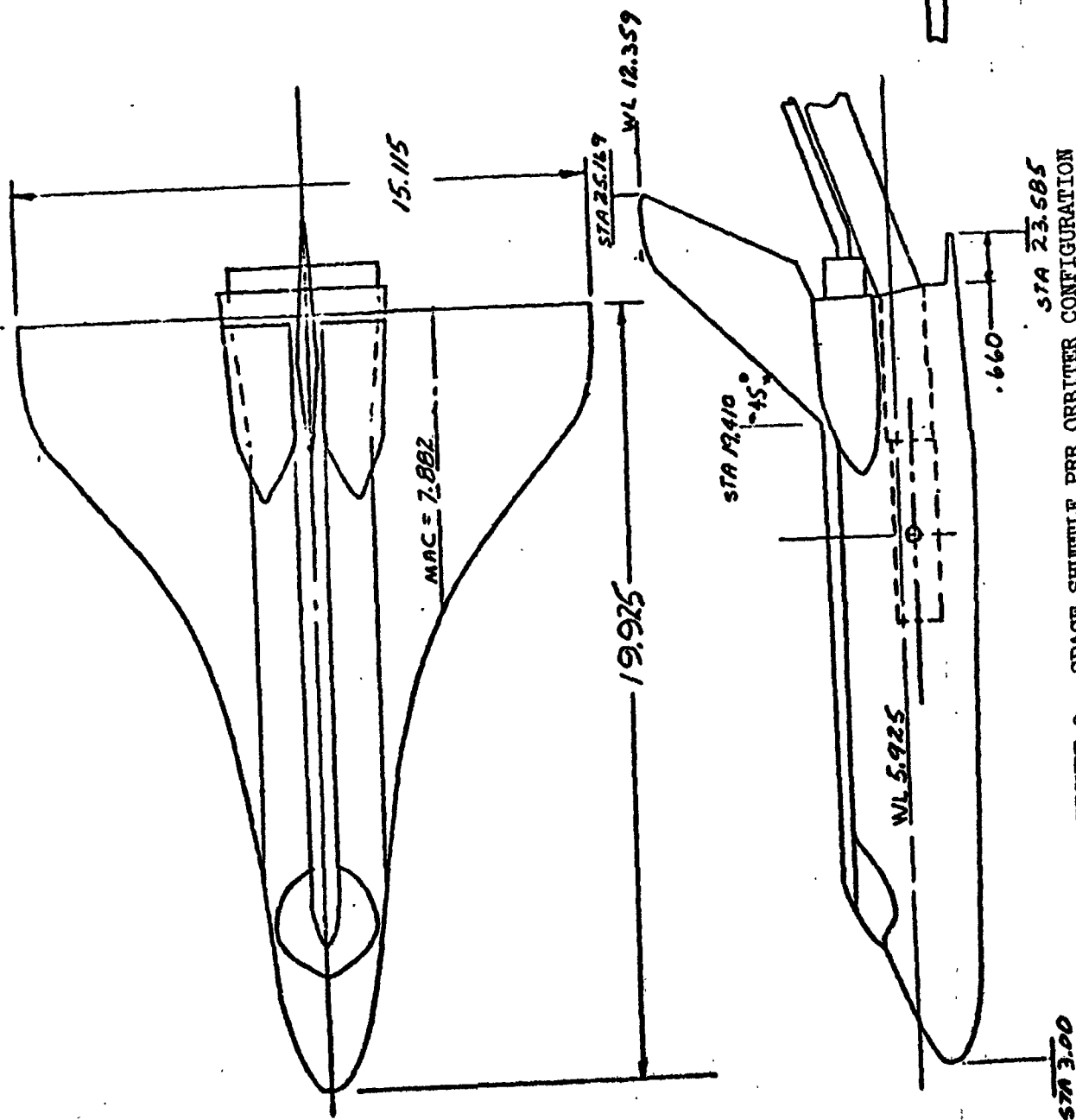


FIGURE 2. SPACE SHUTTLE PRR ORBITER CONFIGURATION

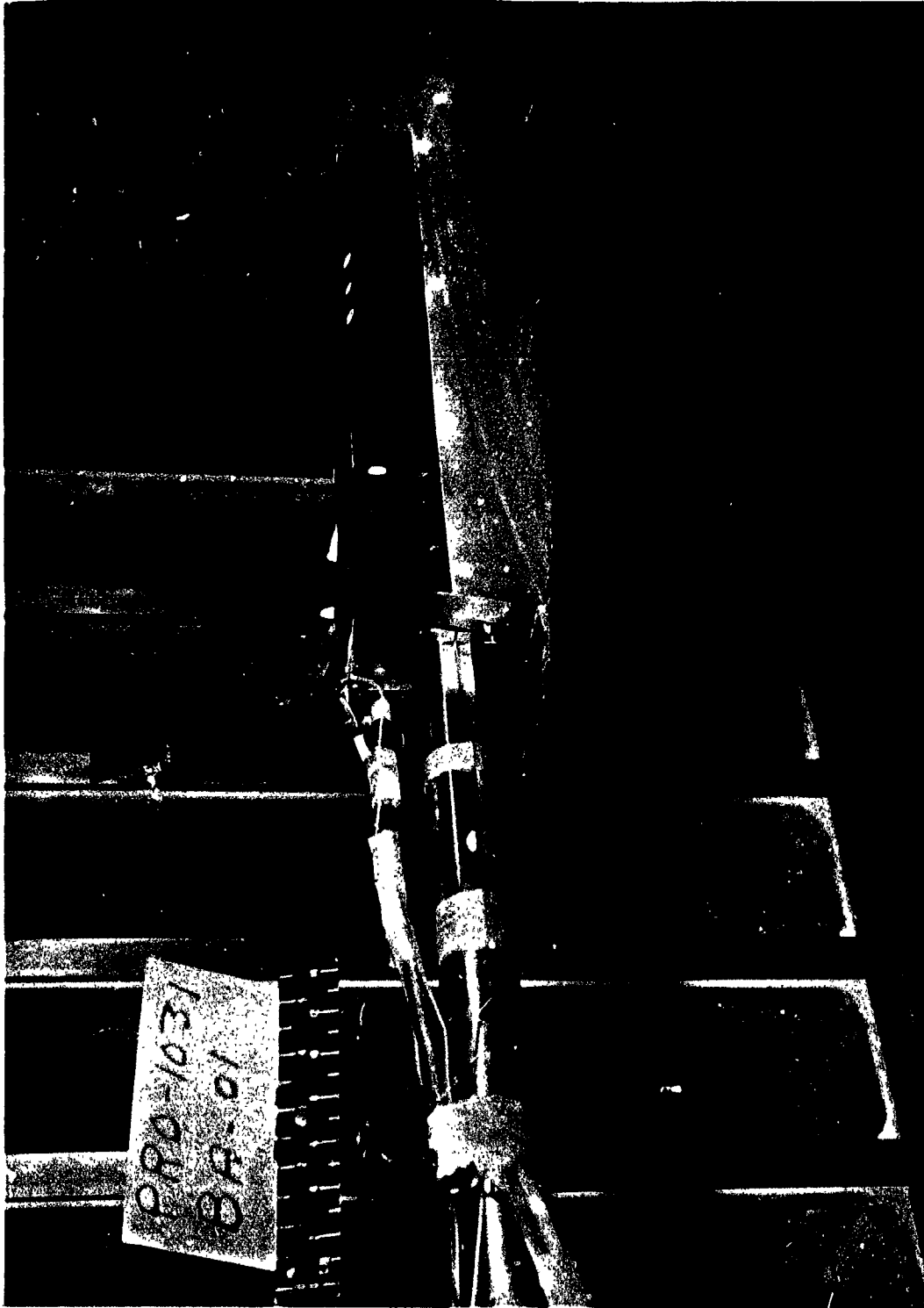


Figure 3. Photograph of .015 Scale Model Orbiter Installed in the NASA/LARC Unitary Plan Wind Tunnel

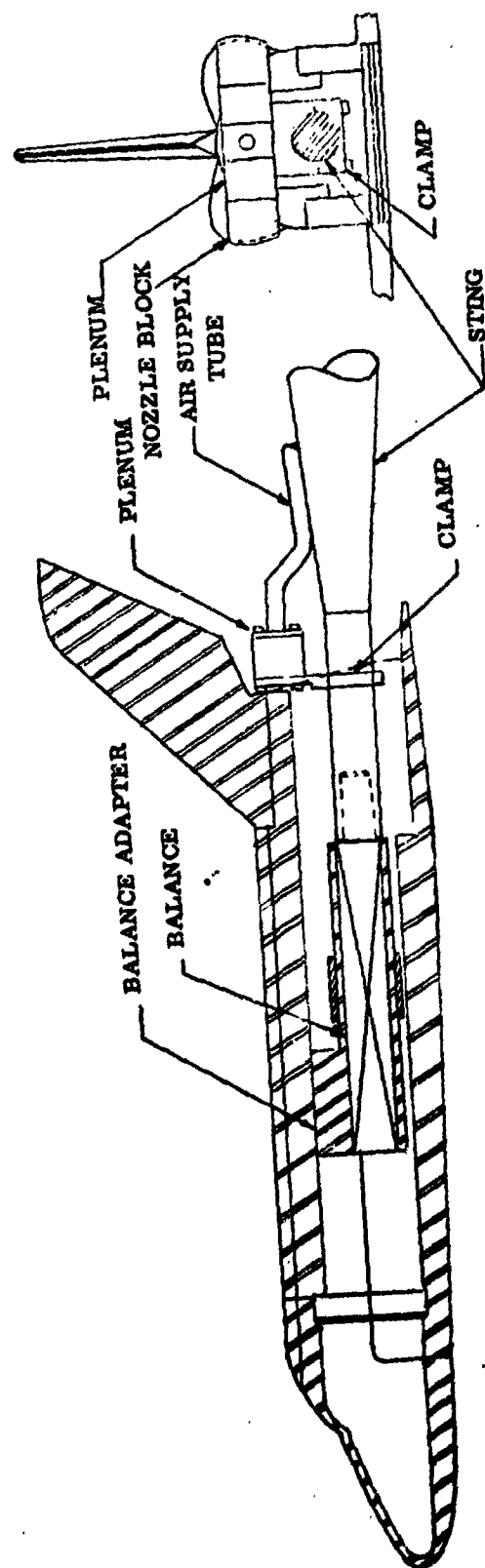


FIGURE 4. CUT-AWAY OF ORBITER SHOWING MODEL ASSEMBLY DETAILS



**Figure 5. Photograph of .015 Scale Model Orbiter & RCS Nozzles.**

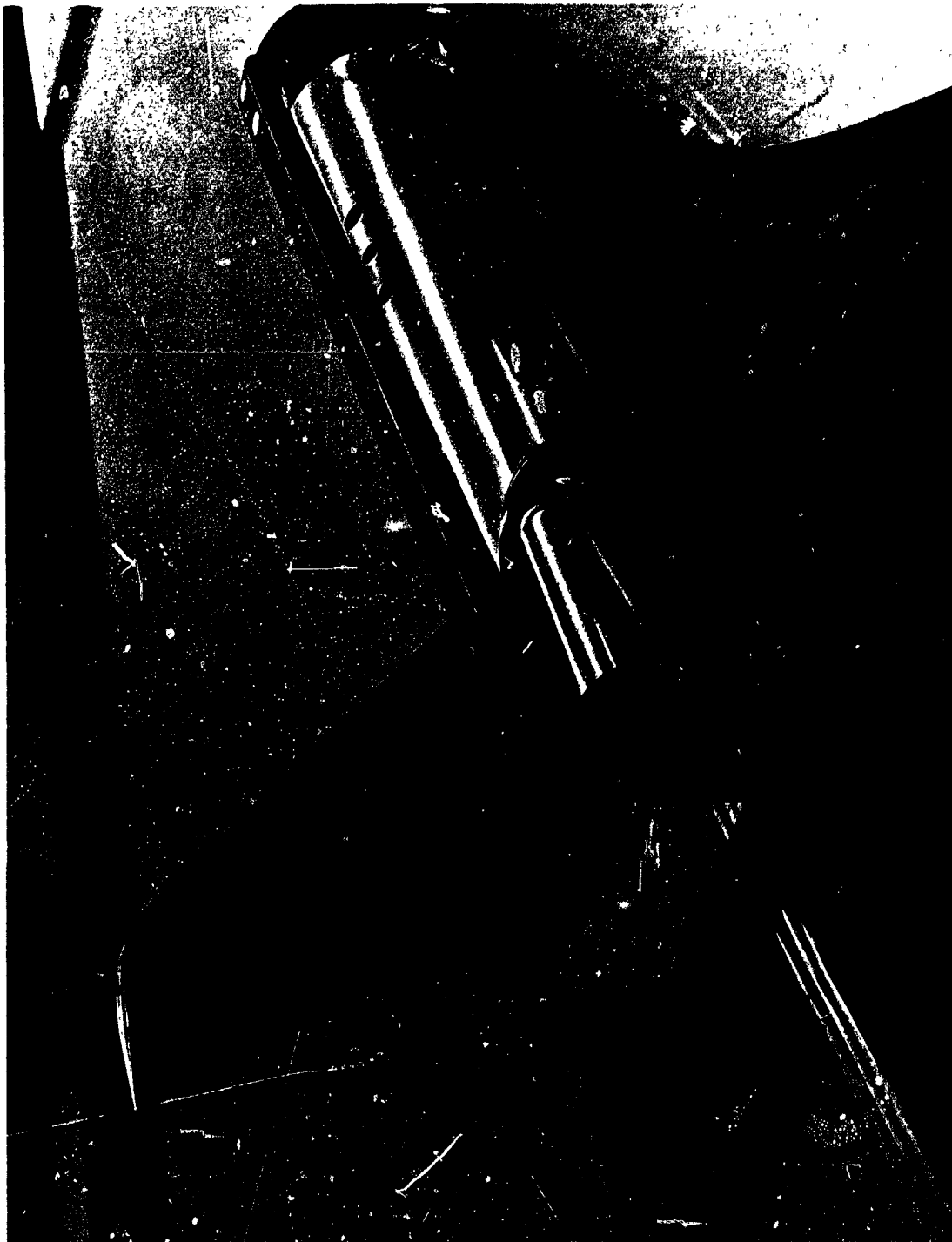


Figure 6. Photograph of .015 Scale Model Orbiter Depicting RCS Nozzle Installation.

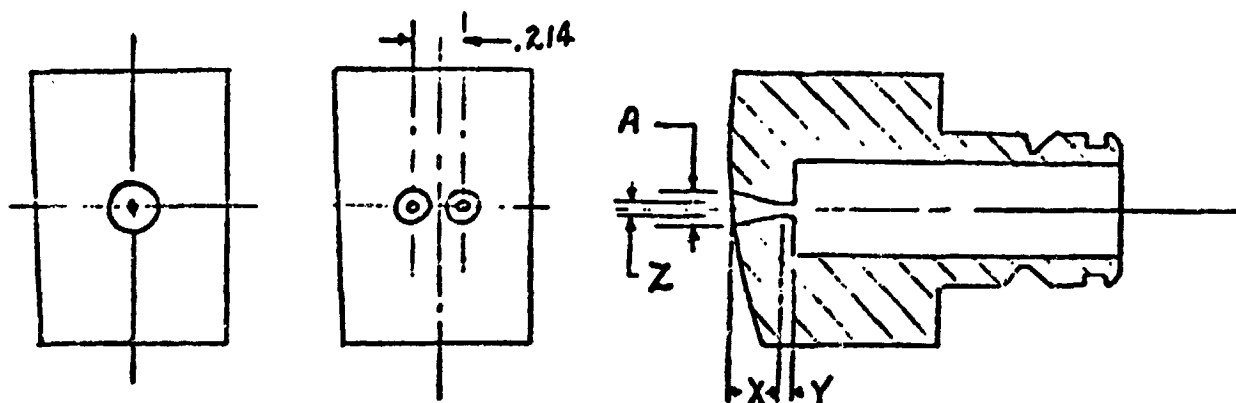


Figure 7. Photograph of .015 Scale Model Orbiter (Top View)



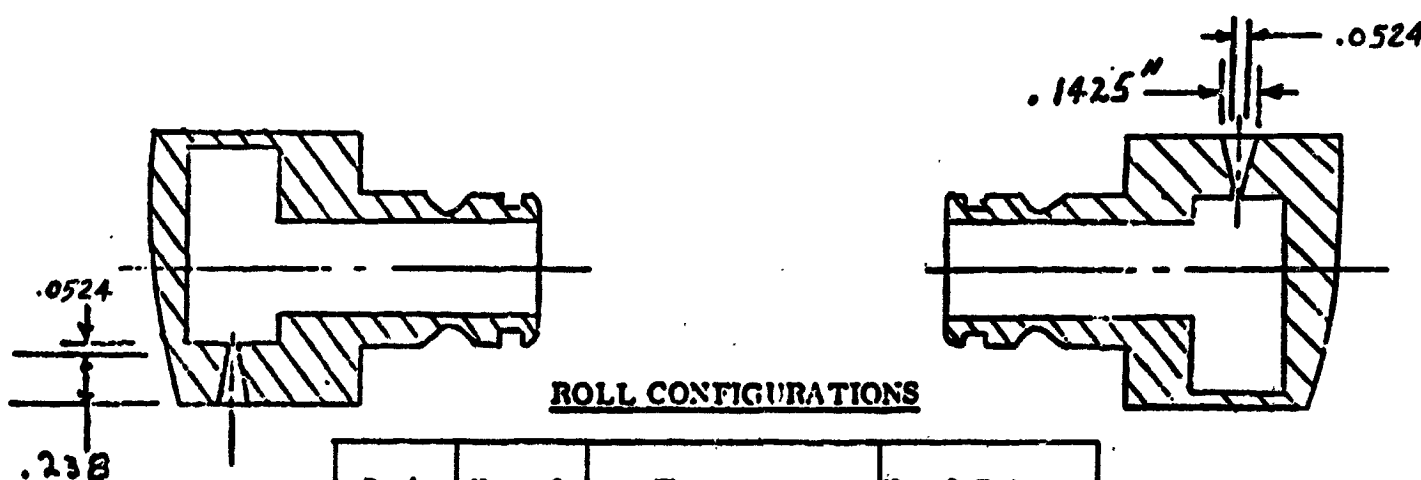
Single Nozzle

Twin Nozzle



YAW CONFIGURATIONS

Dash No.	No. of Nozzles	X		Z		A		Exp. Ratio
		X	Y	Dia	Area	Dia	Area	
-33	2	.238	.524	.0524	.002156	.1425	.0159	2.72
-35	2	.169	.0883	.0883	.00612	.1425	.0159	1.61
-37	2	.199	.0748	.0748	.004394	.1425	.0159	1.91
-39	1	.337	.0741	.0741	.004312	.2015	.0319	2.72



ROLL CONFIGURATIONS

Dash No.	No. of Nozzles	Throat		No. 2 Exit	
		Dia.	Area	Dia.	Area
-29	2	.0524	.002156	.1425	.0159
-31	2	.0524	.002156	.1425	.0159

FIGURE 8. DETAILS OF NOZZLE GEOMETRY

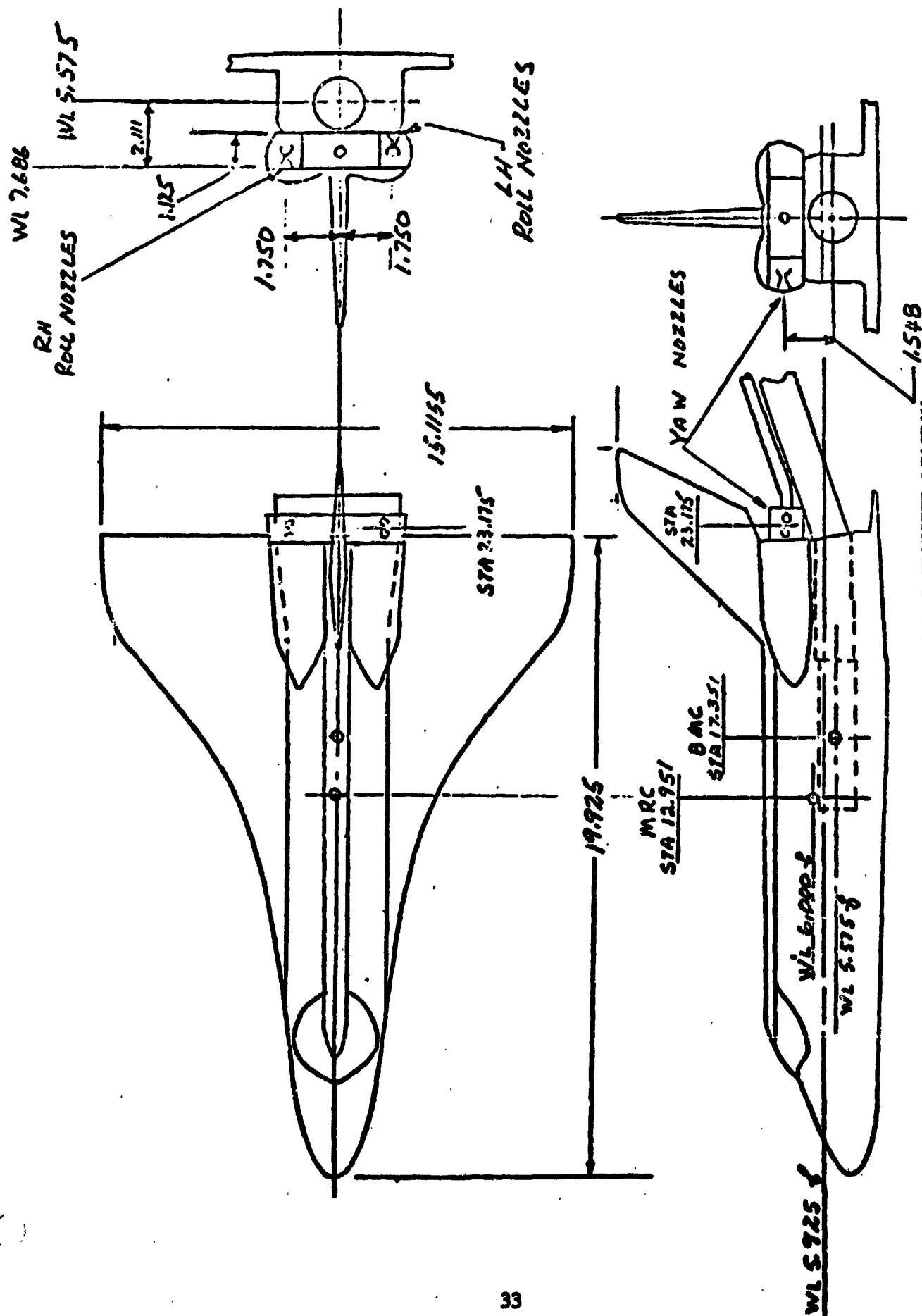


FIGURE 9. NOZZLE LOCATIONS AND MOMENT TRANSFER DIAGRAM

DATA FIGURES

REFERENCE INFORMATION  
 SREF 7245 SC.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XREF 12.5510 INCHES  
 YREF 6.0000 INCHES  
 ZREF 6.0000 INCHES  
 SCALE .0150

BETA .000  
 PO-SET .000  
 RN/L 1.000  
 .000  
 .000  
 .000  
 .000

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 SVTNI  
 SVTNI  
 SVTNI

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 CONF.  
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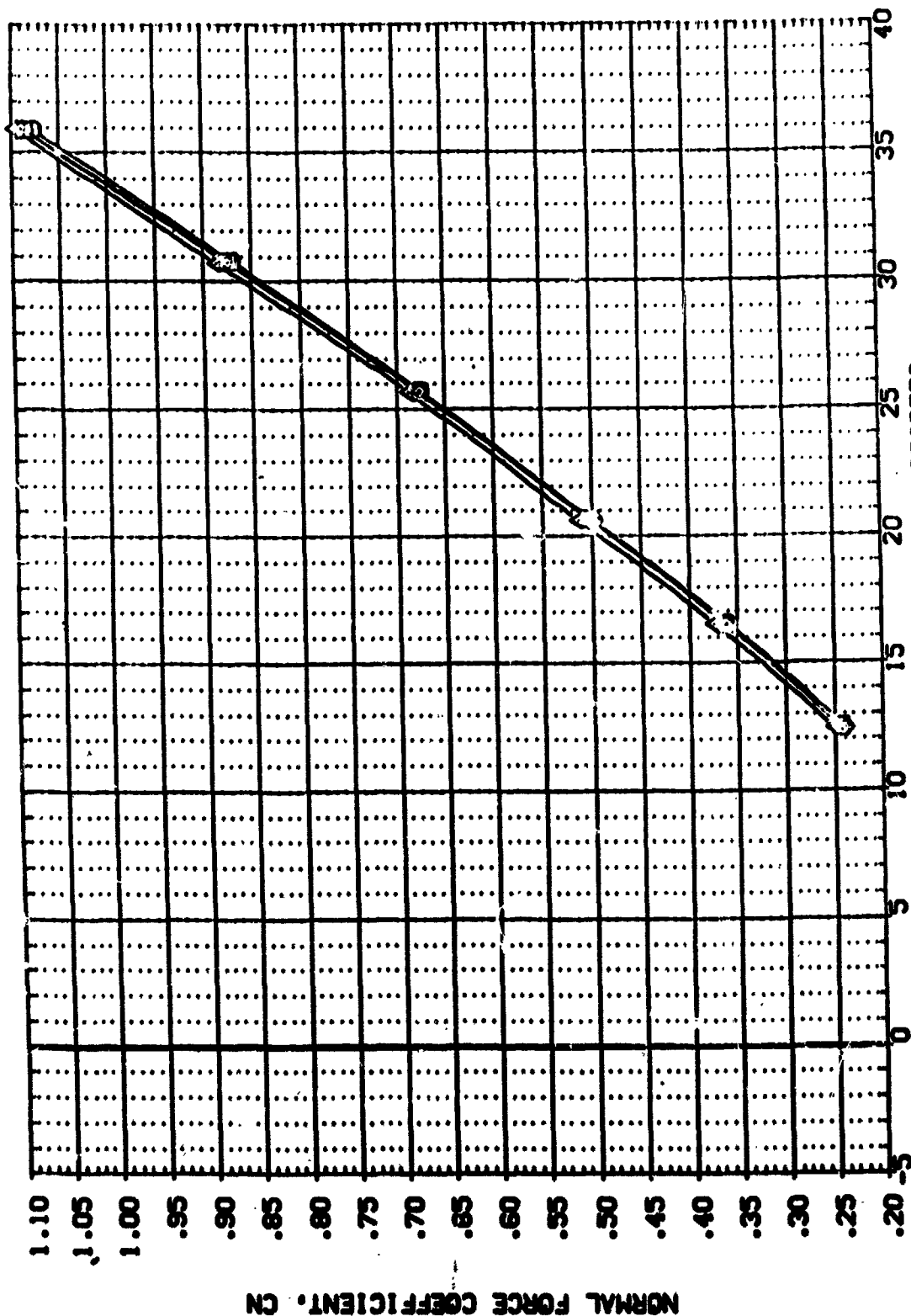
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CONF.  
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ORR ORR  
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 ORR ORR

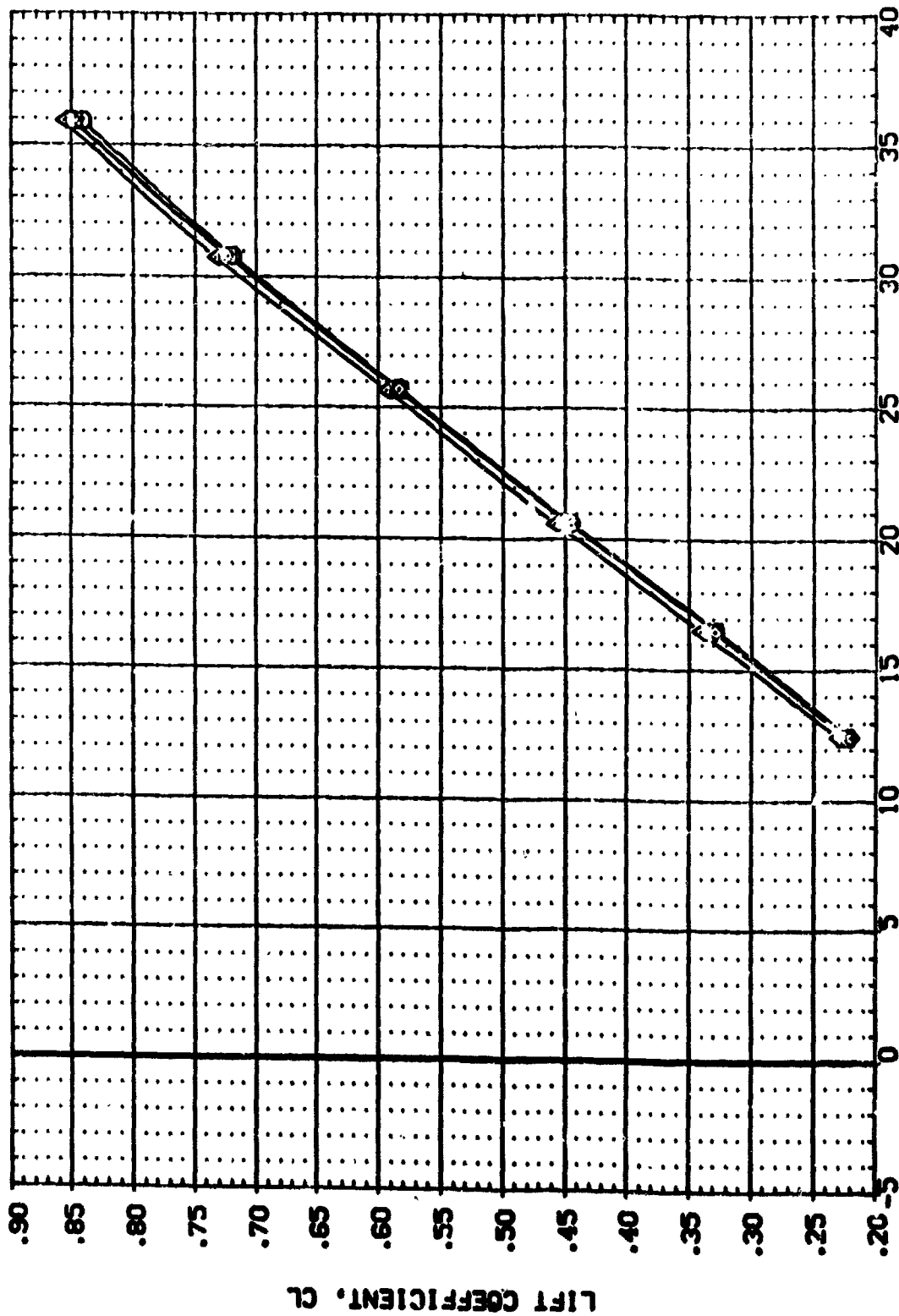


ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 1 MILLION)

(A)MACH = 4.00

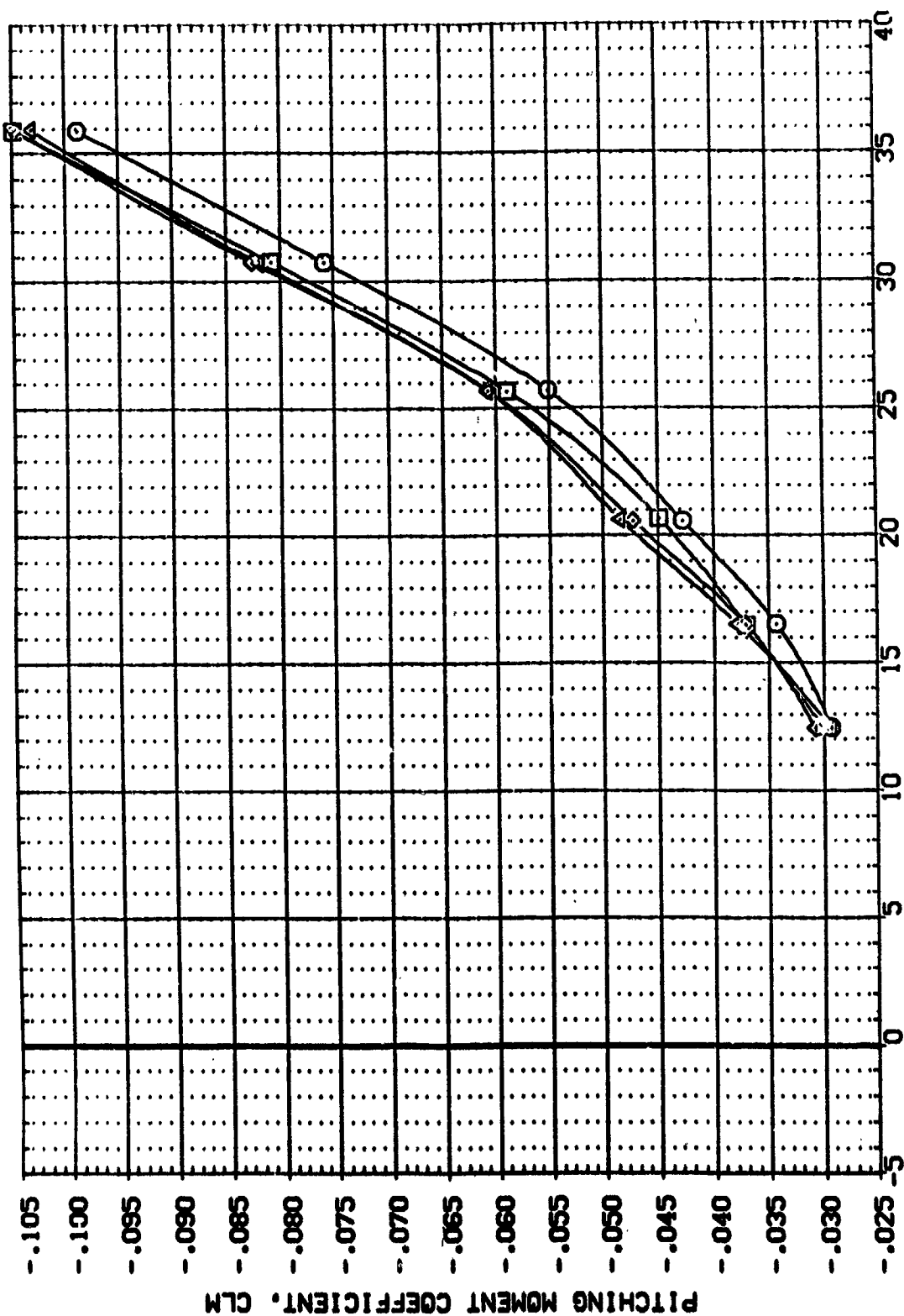
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RN/L	REFERENCE INFORMATION
(CP-021)	MA-7-LPVT 1031-RODWELL PRR C28	.000	.000	1.000	SREF 7245 SQ.FT.
(CP-030)	MA-7-LPVT 1031-RODWELL PRR C28	.000	.000	1.000	LREF 7.8628 INCHES
(CP-038)	MA-7-LPVT 1031-RODWELL PRR C28	.000	.000	1.000	BREF 15.1152 INCHES
(CP-070)	MA-7-LPVT 1031-RODWELL PRR C28	.000	.000	1.000	XREF 12.9510 INCHES
					YREF .0000 INCHES
					ZREF .0000 INCHES
					SCALE .0150



BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 1 MILLION)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH021)	MA-7:UPVT 1031:ROCKWELL PER C58: CONF.	.000	.000	1.000	SREF 7245 SO.FT.
(CPH040)	MA-7:UPVT 1031:ROCKWELL PER C58: CONF.	.000	.000	1.000	LREF 7.8628 INCHES
(CPH058)	MA-7:UPVT 1031:ROCKWELL PER C58: CONF.	.000	.000	1.000	BREF 15.1152 INCHES
(CPH070)	MA-7:UPVT 1031:ROCKWELL PER C58: CONF.	.000	.000	1.000	YMRP 12.9510 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 1 MILLION)

(A)MACH = 4.00

REFERENCE INFORMATION  
 SREF 7245 30.1 FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 YPRP 12.9510 INCHES  
 ZPRP 6.0000 INCHES  
 SCALE .0150

BETA .000  
 PO-JET .000  
 RN/L 1.000

BVTN1  
 BVTN4  
 BVTN40  
 BVTN41

CONF. CONF.  
 CCF. CCF.  
 CCF. CCF.  
 CCF. CCF.

ORB. ORB.  
 ORB. ORB.  
 ORB. ORB.  
 ORB. ORB.

CONF. CONF.  
 CCF. CCF.  
 CCF. CCF.  
 CCF. CCF.

ORB. ORB.  
 ORB. ORB.  
 ORB. ORB.  
 ORB. ORB.

CONF. CONF.  
 CCF. CCF.  
 CCF. CCF.  
 CCF. CCF.

ORB. ORB.  
 ORB. ORB.  
 ORB. ORB.  
 ORB. ORB.

CONF. CONF.  
 CCF. CCF.  
 CCF. CCF.  
 CCF. CCF.

ORB. ORB.  
 ORB. ORB.  
 ORB. ORB.  
 ORB. ORB.

CONF. CONF.  
 CCF. CCF.  
 CCF. CCF.  
 CCF. CCF.

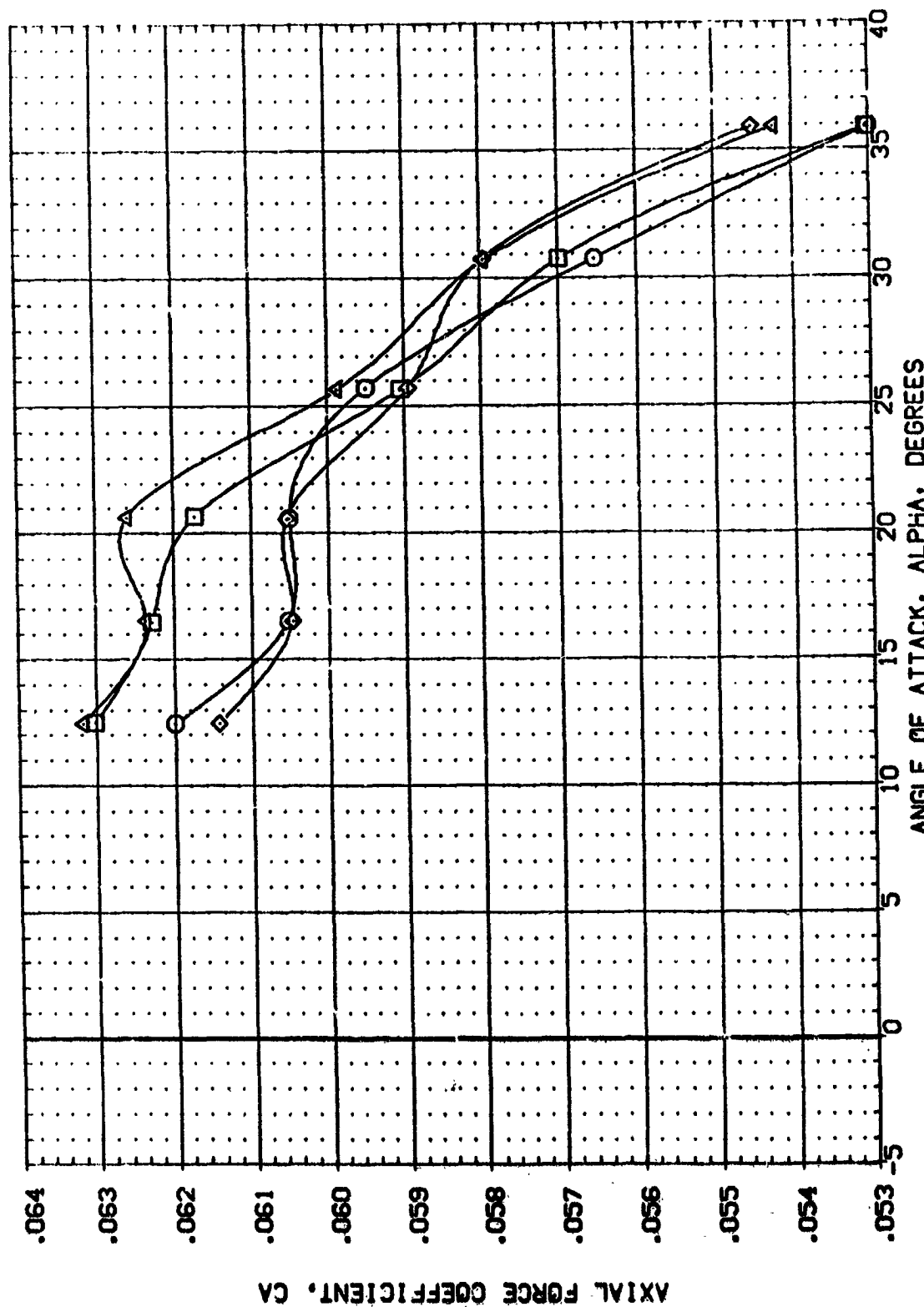
ORB. ORB.  
 ORB. ORB.  
 ORB. ORB.  
 ORB. ORB.

CONF. CONF.  
 CCF. CCF.  
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 CCF. CCF.

ORB. ORB.  
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 ORB. ORB.

CONF. CONF.  
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 CCF. CCF.

ORB. ORB.  
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 ORB. ORB.

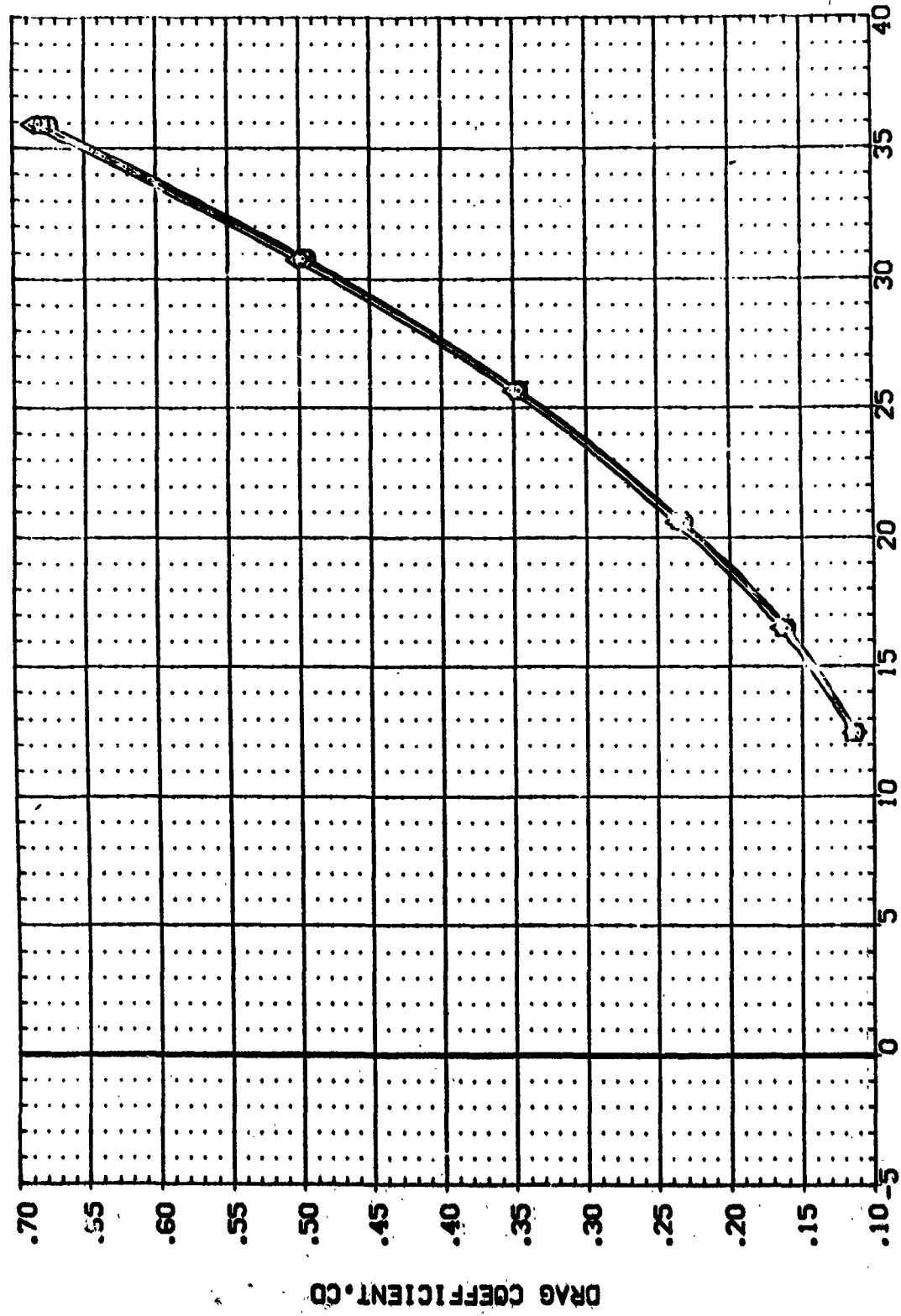


BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 1 MILLION)

(A)MACH = 4.00



DATA SET SYMBOL	CONF IGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH021)	MA-7-UPVT 1031-ROCKWELL PRR 0RB. CONF: BVTN1	.000	.000	1.000	SREF 7245 50 FT
(CPH040)	MA-7-UPVT 1031-ROCKWELL PRR 0RB. CONF: BVTN4	.000	.000	1.000	LREF 7.8828 INCHES
(CPH058)	MA-7-UPVT 1031-ROCKWELL PRR 0RB. CONF: BVTN40	.000	.000	1.000	BREF 15.1152 INCHES
(CPH070)	MA-7-UPVT 1031-ROCKWELL PRR 0RB. CONF: BVTN41	.000	.000	1.000	XCRP 12.9510 INCHES
					YCRP .0000 INCHES
					ZCRP 6.0000 INCHES
					SCALE .0150

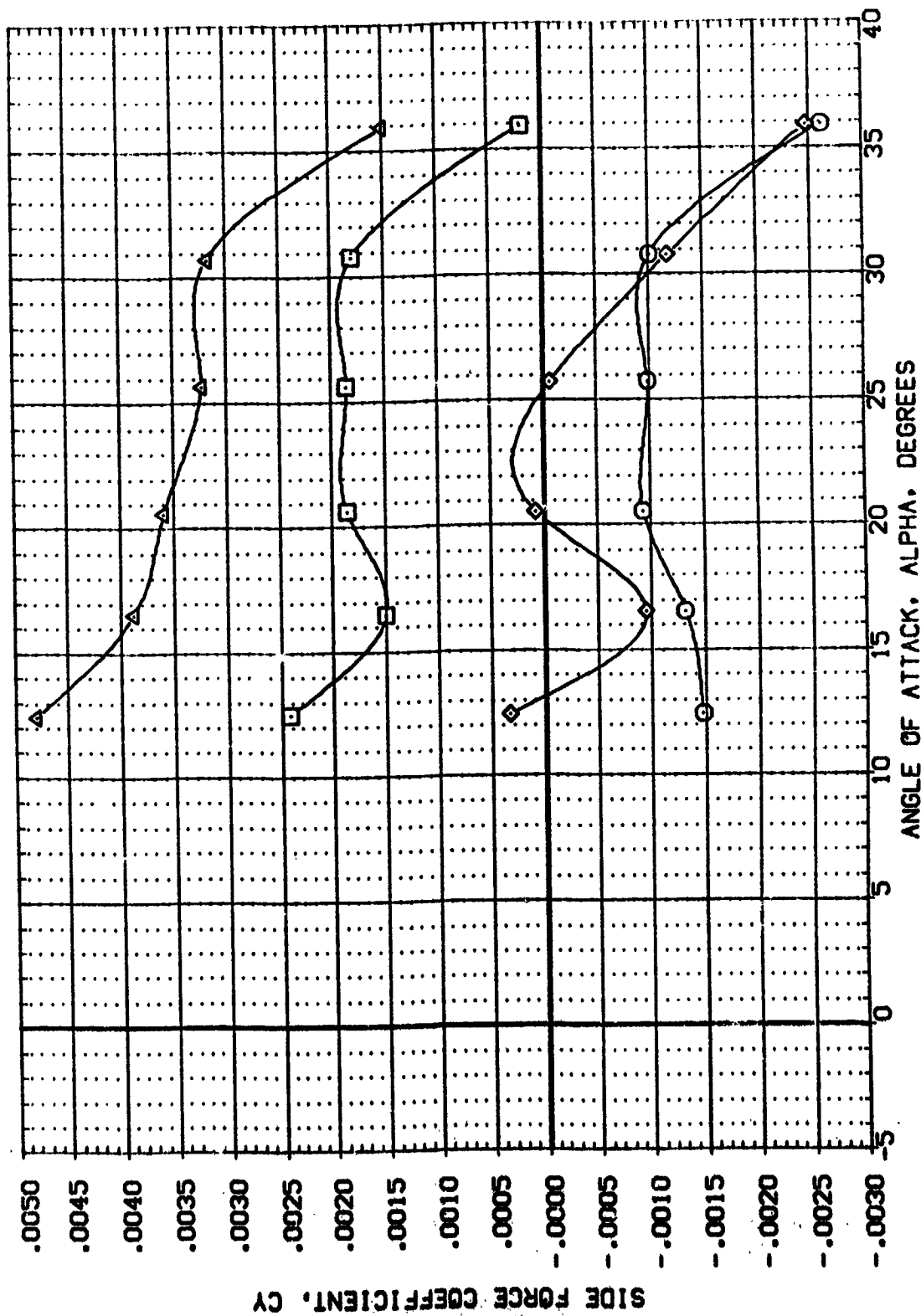


BASIC CONFIGURATION DATA REPEATABILITY (RN/L= 1 MILLION)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH021)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN1	.000	.000	1.000	SREF 7245 SQ.FT.
(CPH040)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN4	.000	.000	1.000	LREF 7.8828 INCHES
(CPH058)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN40	.000	.000	1.000	BREF 15.1152 INCHES
(CPH070)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN41	.000	.000	1.000	XPRP 12.9510 INCHES
					YPRP 6.0000 INCHES
					ZPRP 6.0000 INCHES
					SCALE .0150

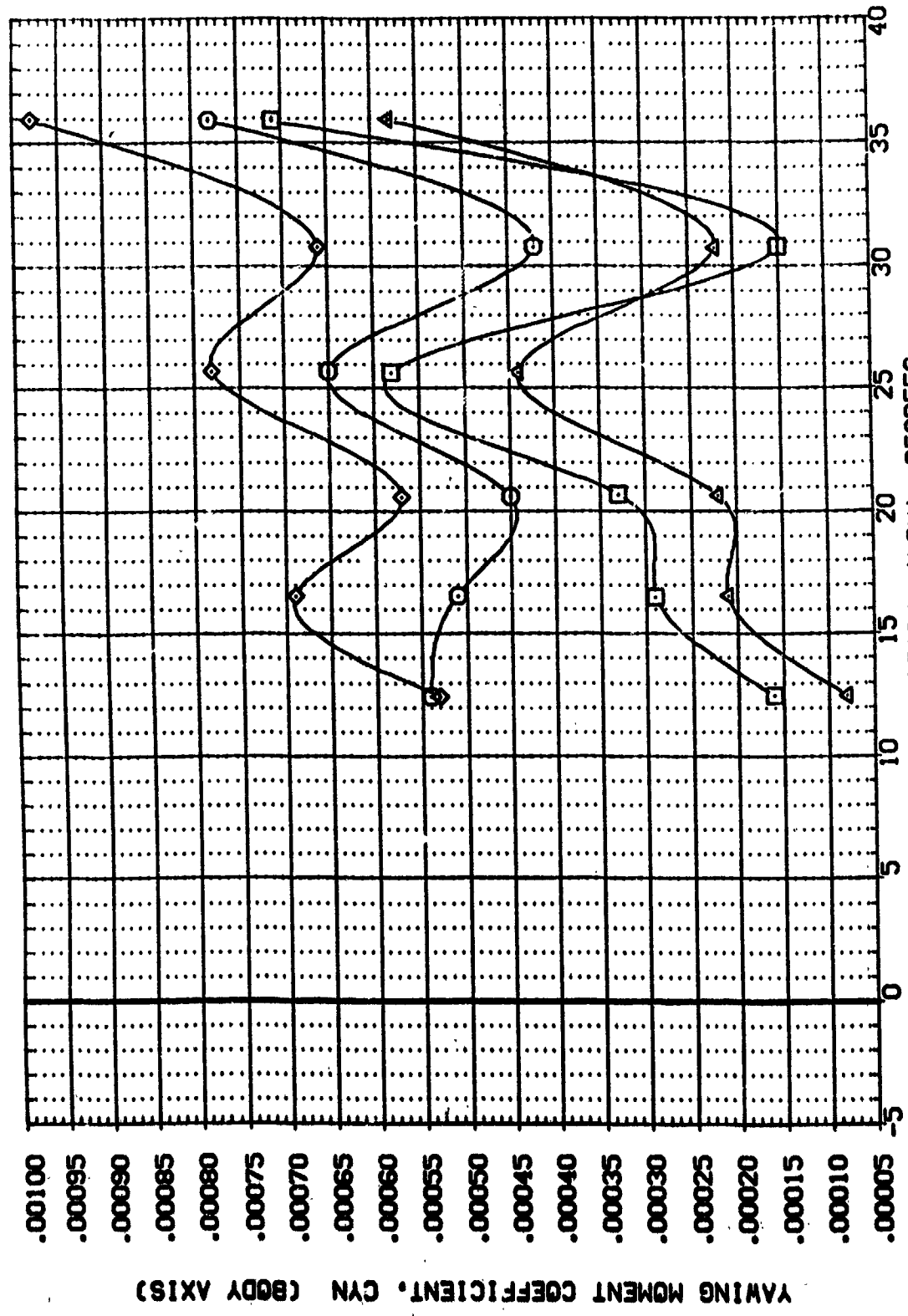


BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 1 MILLION)

(AJMACH = 4.00)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CONF.	BVTN1	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH021)	MA-7, UPVT 1031, ROCKWELL	PRR	088	.000	.000	1.000	SREF .7245 SO.FT. INCHES
(CPH040)	MA-7, UPVT 1031, ROCKWELL	PRR	088	.000	.000	1.000	LREF 7.8828 INCHES
(CPH058)	MA-7, UPVT 1031, ROCKWELL	PRR	088	.000	.000	1.000	BREF 15.1152 INCHES
(CPH070)	MA-7, UPVT 1031, ROCKWELL	PRR	088	.000	.000	1.000	XMRP 12.9510 INCHES
							YMRP .0000 INCHES
							ZMRP 6.0000 INCHES
							SCALE .0150



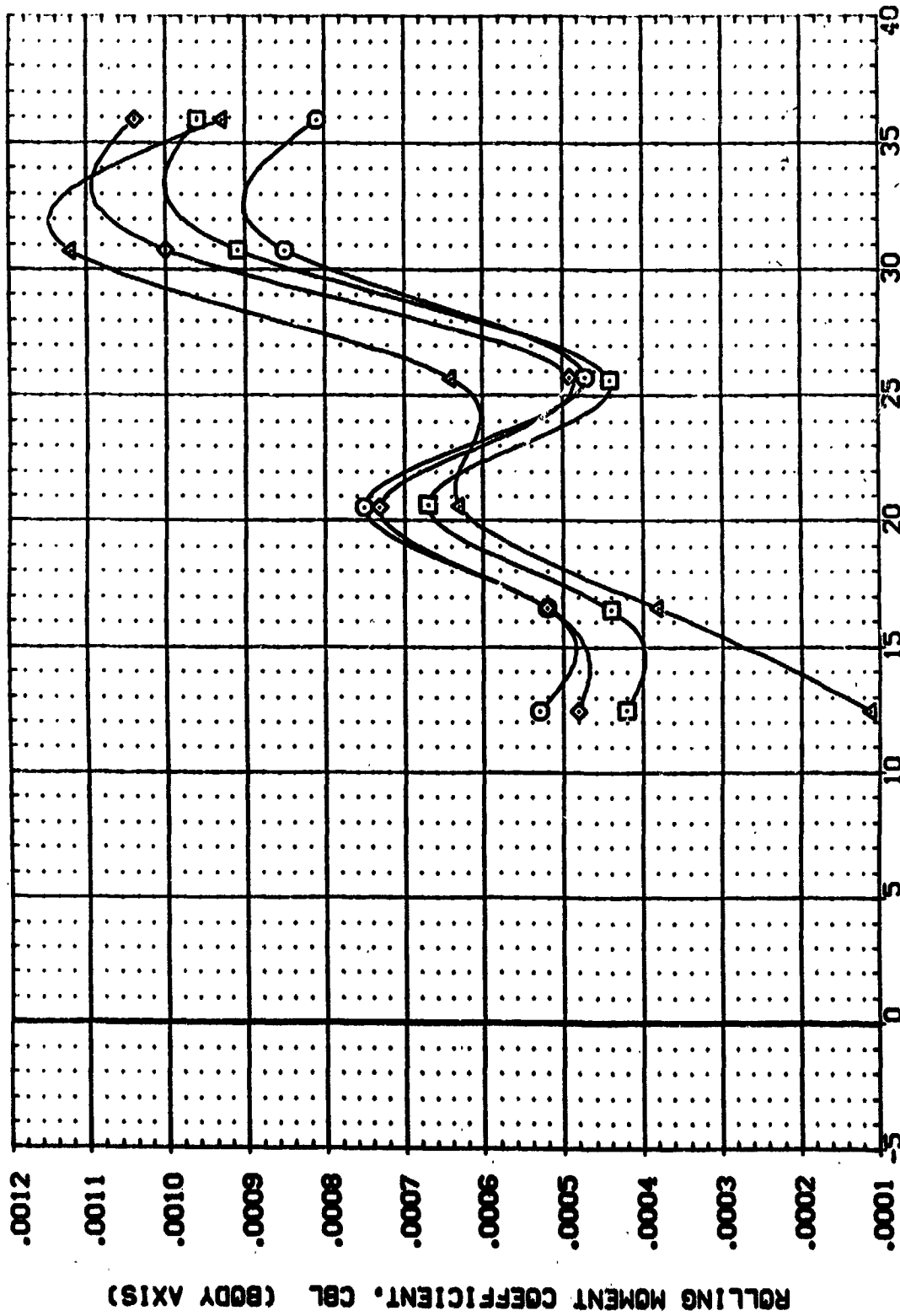
ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L= 1 MILLION)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CH021)	MA-7-UPVT 1031, ROCKWELL PRR 738, CONF.	.000	.000	1.000	SREF 7245 SQ.FT.
(CH040)	MA-7-UPVT 1031, ROCKWELL PRR 038, CONF.	.000	.000	1.000	LREF 7.8828 INCHES
(CH058)	MA-7-UPVT 1031, ROCKWELL PRR 038, CONF.	.000	.000	1.000	BREF 15.1152 INCHES
(CH070)	MA-7-UPVT 1031, ROCKWELL PRR 038, CONF.	.000	.000	1.000	YMRP 12.9510 INCHES
					ZMRP .0000 INCHES
					SCALE .0150 INCHES



ANGLE OF ATTACK, ALPHA, DEGREES

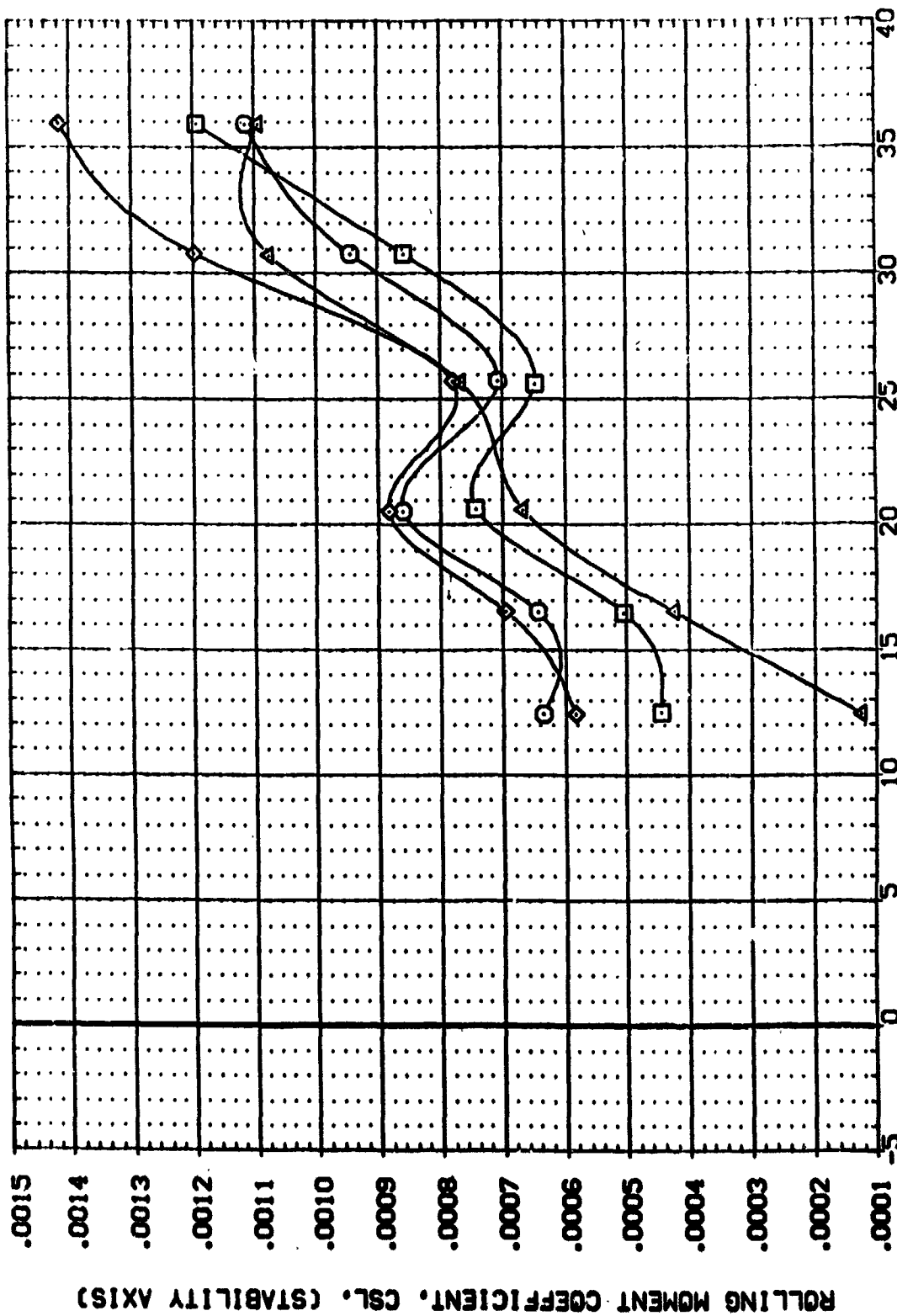
BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 1 MILLION)

(A)MACH = 4.00

REFERENCE INFORMATION  
 SREF 7245 SQ.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XMRP 12.9510 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 6.0000 INCHES  
 SCALE 0.0150

BETA PO-JET RV/L  
 .000 .000 1.000  
 .000 .000 1.000  
 .000 .000 1.000  
 .000 .000 1.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (CPH021) MA-7,LPVT 1031,ROCKWELL PRR 058, CONF. BVTN1  
 (CPH040) MA-7,LPVT 1031,ROCKWELL PRR 058, CONF. BVTN4  
 (CPH058) MA-7,LPVT 1031,ROCKWELL PRR 058, CONF. BVTN40  
 (CPH070) MA-7,LPVT 1031,ROCKWELL PRR 058, CONF. BVTN41

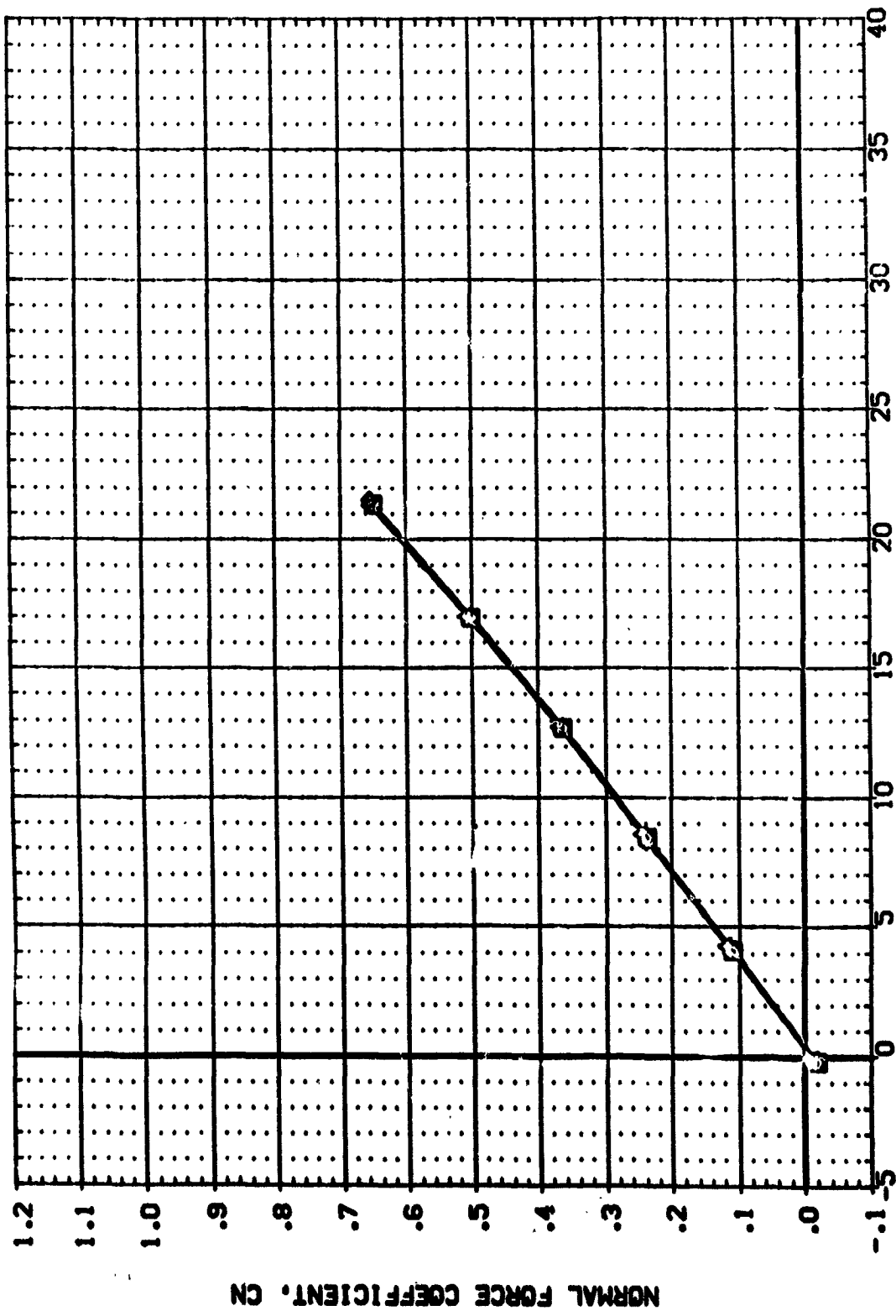


BASIC CONFIGURATION DATA REPEATIBILITY (RN/L= 1 MILLION)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPO16)	MA-7, UPVT 10.31, ROCKWELL PRR 088.	.000	.000	3.000	SREF .7245 SO.FT.
(BPO36)	MA-7, UPVT 10.31, ROCKWELL PRR 088.	.000	.000	3.000	LREF 7.8828 INCHES
(BPO55)	MA-7, UPVT 10.31, ROCKWELL PRR 088.	.000	.000	3.000	EREF 15.1152 INCHES
(BPO57)	MA-7, UPVT 10.31, ROCKWELL PRR 088.	.000	.000	3.000	XREF 12.9510 INCHES
					YREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150

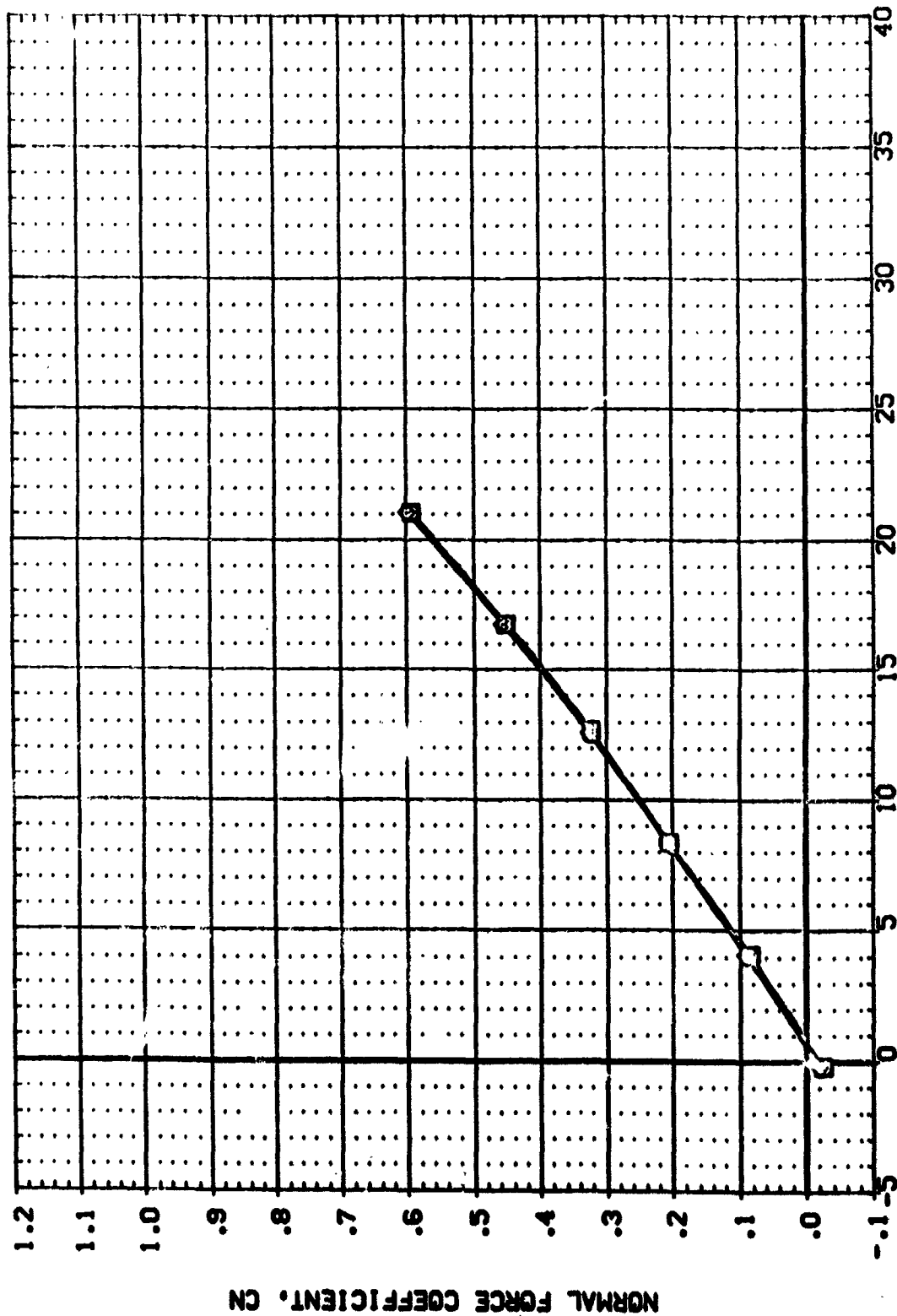


ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 3 MILLION)

(A)MACH = 2.50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPO16)	MA-7, UPVT 1031, ROCKVELL PRR QRB, COVF.	.000	.000	3.000	SREF .7245 SO.FT.
(BPO16)	MA-7, UPVT 1031, ROCKVELL PRR QRB, COVF.	.000	.000	3.000	LREF 7.8828 INCHES
(BPO16)	MA-7, UPVT 1031, ROCKVELL PRR QRB, COVF.	.000	.000	3.000	BREF 15.1152 INCHES
(BPO16)	MA-7, UPVT 1031, ROCKVELL PRR QRB, COVF.	.000	.000	3.000	XREF 12.9510 INCHES
(BPO16)	MA-7, UPVT 1031, ROCKVELL PRR QRB, COVF.	.000	.000	3.000	YREF .0000 INCHES
(BPO16)	MA-7, UPVT 1031, ROCKVELL PRR QRB, COVF.	.000	.000	3.000	ZREF 6.0000 INCHES
(BPO16)	MA-7, UPVT 1031, ROCKVELL PRR QRB, COVF.	.000	.000	3.000	SCALE .0150

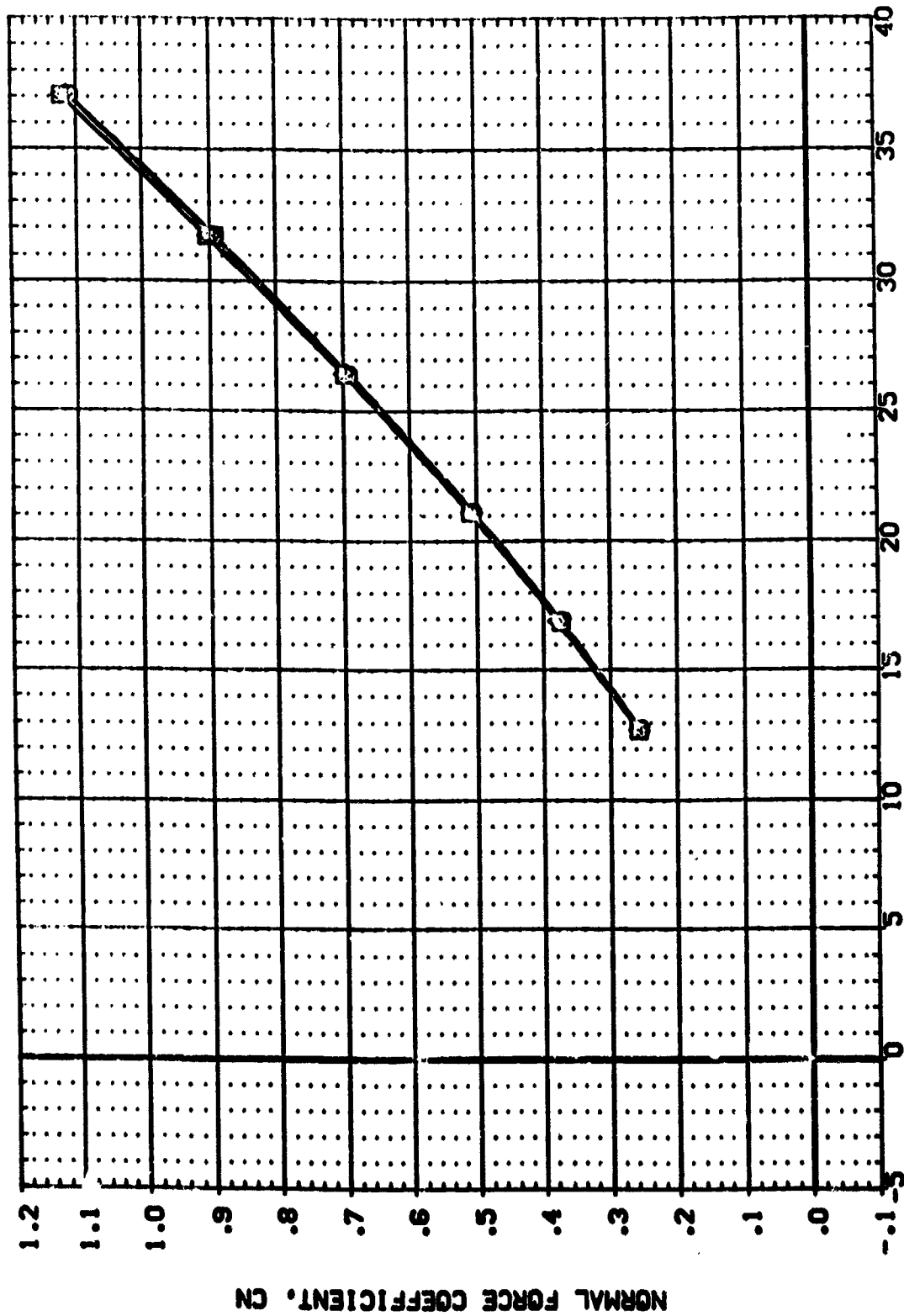


BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

(B)MACH = 2.95



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPH016)	MA-7.5PMT 1031: RCVNELL	.000	.000	3.000	SREF 7245 SO.FT.
(BPH036)	MA-7.5PMT 1031: RCVNELL	.000	.000	3.000	LREF 7.8828 INCHES
(BPH055)	MA-7.5PMT 1031: RCVNELL	.000	.000	3.000	SREF 15.1152 INCHES
(BPH067)	MA-7.5PMT 1031: RCVNELL	.000	.000	3.000	XREF 12.9510 INCHES
					YREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150



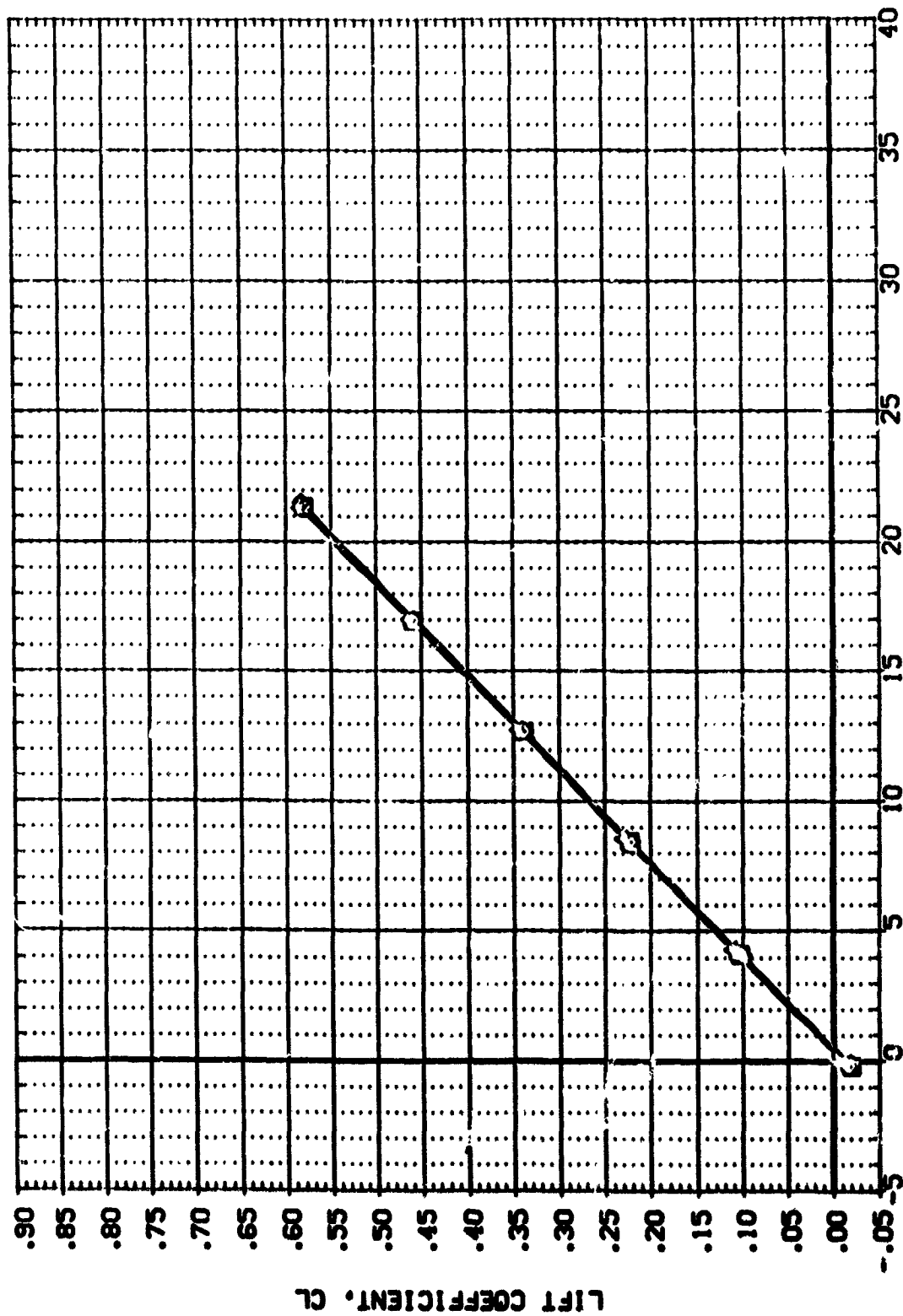
ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

(CJMACH = 4.00



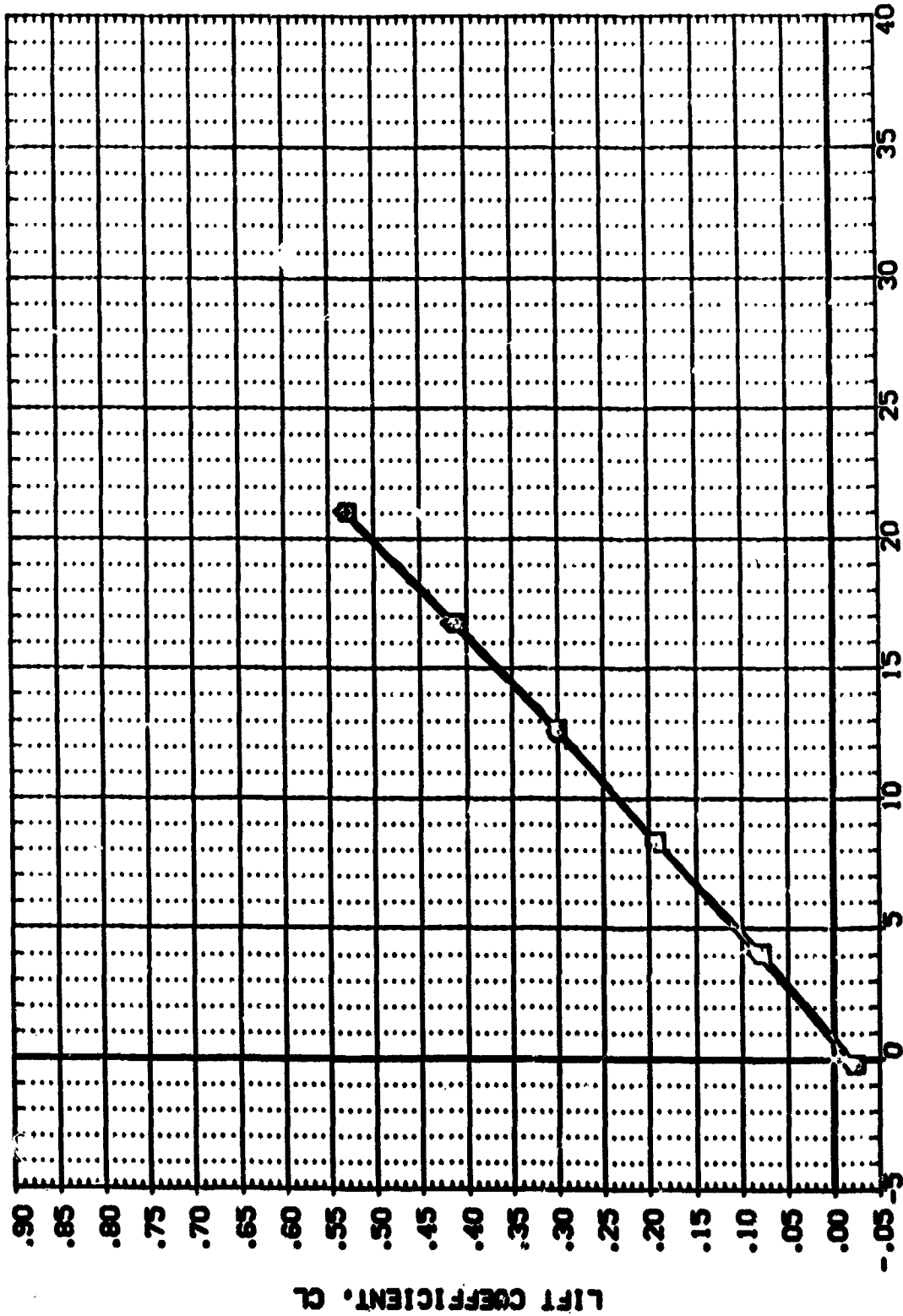
DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA		PO-JET		RN/L		REFERENCE INFORMATION	
(BPH015)	MA-7, UPVT	1031, ROCKWELL	PRR	CRB	CONF.	BTN1	.000	.000	3.000	SREF	.7245
(BPH016)	MA-7, UPVT	1031, ROCKWELL	PRR	CRB	CONF.	BTN1	.000	.000	3.000	LREF	7.6828
(BPH017)	MA-7, UPVT	1031, ROCKWELL	PRR	CRB	CONF.	BTN1	.000	.000	3.000	BREF	15.1152
(BPH018)	MA-7, UPVT	1031, ROCKWELL	PRR	CRB	CONF.	BTN1	.000	.000	3.000	XREF	12.9510
(BPH019)	MA-7, UPVT	1031, ROCKWELL	PRR	CRB	CONF.	BTN1	.000	.000	3.000	YREF	6.0000
(BPH020)	MA-7, UPVT	1031, ROCKWELL	PRR	CRB	CONF.	BTN1	.000	.000	3.000	ZREF	6.0150
(BPH021)	MA-7, UPVT	1031, ROCKWELL	PRR	CRB	CONF.	BTN1	.000	.000	3.000	SCALE	



BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 3 MILLION)

(M)MACH = 2.50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(SP-016)	MA-7, UPVT 1031, ROCKWELL PER DB.	.000	.000	3.000	SREF 7245 50. FT.
(SP-036)	MA-7, UPVT 1031, ROCKWELL PER DB.	.000	.000	3.000	LREF 7.6828 INCHES
(SP-055)	MA-7, UPVT 1031, ROCKWELL PER DB.	.000	.000	3.000	BREF 15.1152 INCHES
(SP-057)	MA-7, UPVT 1031, ROCKWELL PER DB.	.000	.000	3.000	XREF 12.5510 INCHES
					YREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150

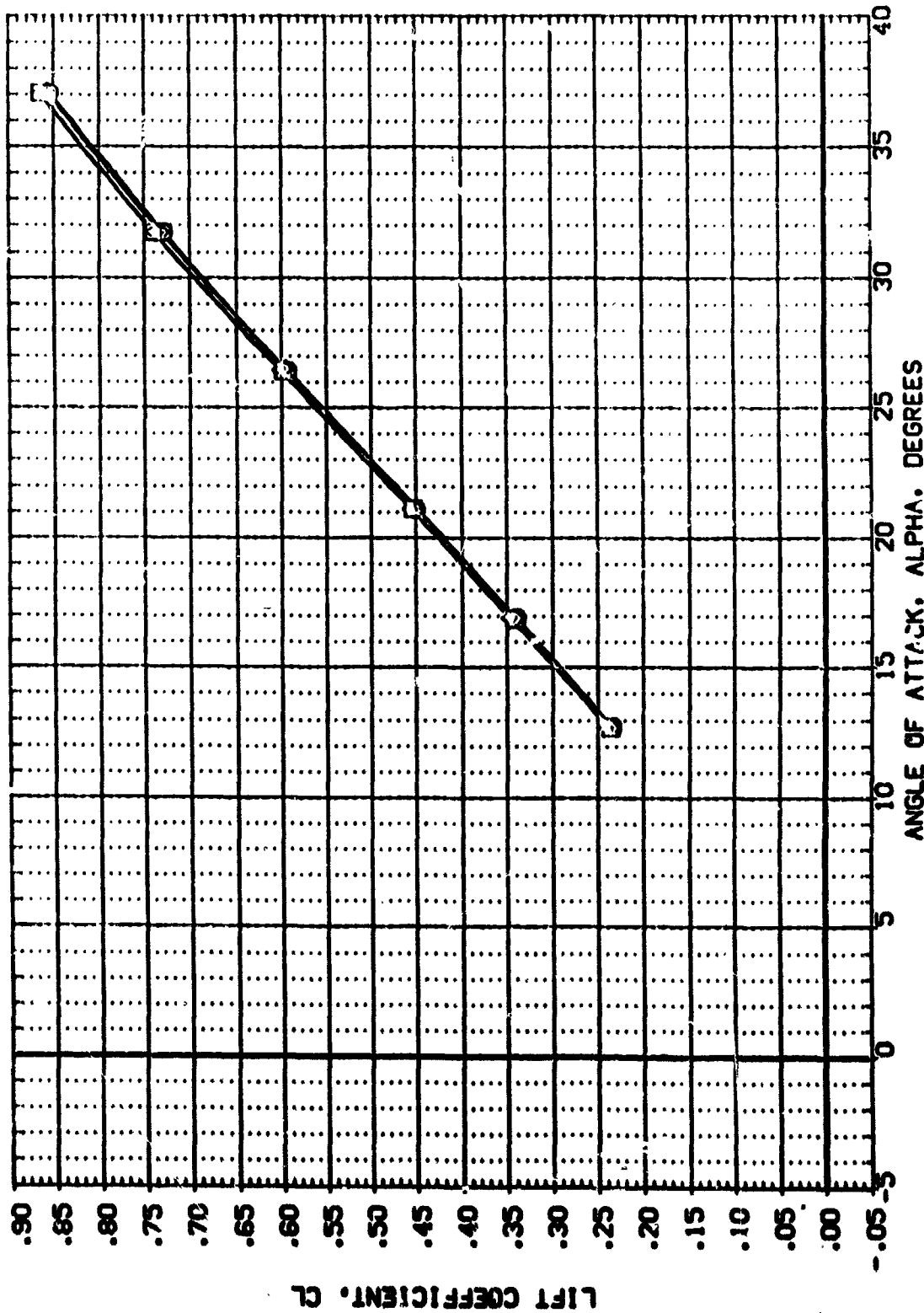


ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

(B)MACH = 2.95

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPO16)	MA-7-UPVT 1031-ROONVELL PRR CRB	.000	.000	3.000	SREF .7245
(BPO17)	MA-7-UPVT 1031-ROONVELL PRR CRB	.000	.000	3.000	LREF 7.8828
(BPO18)	MA-7-UPVT 1031-ROONVELL PRR CRB	.000	.000	3.000	BREF 15.1152
(BPO19)	MA-7-UPVT 1031-ROONVELL PRR CRB	.000	.000	3.000	XREF 12.9510
(BPO20)	MA-7-UPVT 1031-ROONVELL PRR CRB	.000	.000	3.000	YREF .0000
(BPO21)	MA-7-UPVT 1031-ROONVELL PRR CRB	.000	.000	3.000	ZREF 6.0000
(BPO22)	MA-7-UPVT 1031-ROONVELL PRR CRB	.000	.000	3.000	SCALE .0150



BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 3 MILLION)

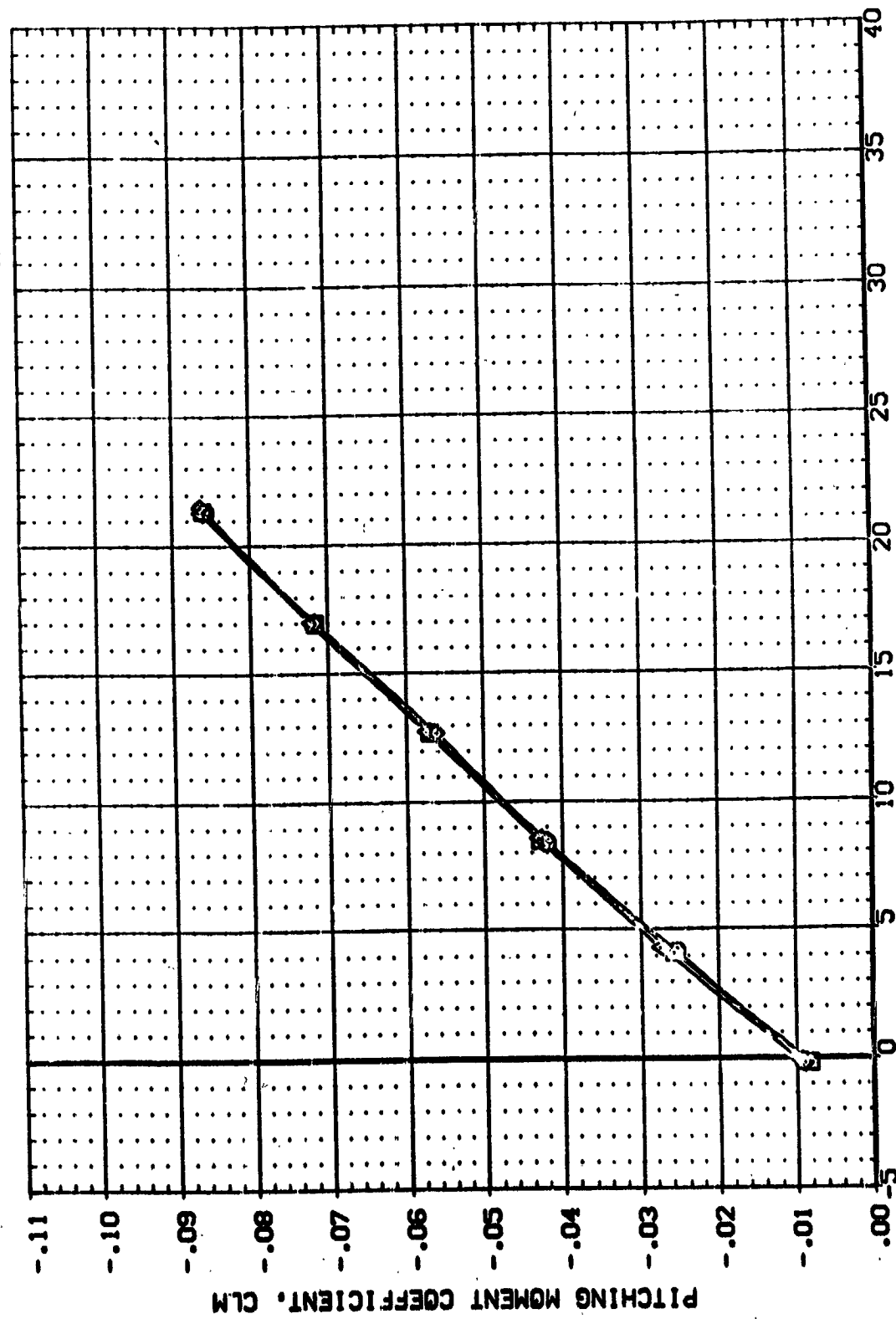
(C)MACH = 4.00



DATA SET SYMBOL: (BPH016), (BPH035), (BPH055), (BPH067)  
CONFIGURATION DESCRIPTION: MA-7-UPVT 1031, ROCKWELL PRP C88, CONF. C88; MA-7-UPVT 1031, ROCKWELL PRP C79, CONF. C79; MA-7-UPVT 1031, ROCKWELL PRP C73, CONF. C73; MA-7-UPVT 1031, ROCKWELL PRP C63, CONF. C63

BETA: .000, .000, .000, .000  
PO-JET: .000, .000, .000, .000  
RN/L: 3.000, 3.000, 3.000, 3.000

REFERENCE INFORMATION:  
SREF: .7245 SQ. FT.  
LREF: 7.8828 INCHES  
BREF: 15.1152 INCHES  
XMRP: 12.9510 INCHES  
YMRP: .0000 INCHES  
ZMRP: .0000 INCHES  
SCALE: .0150

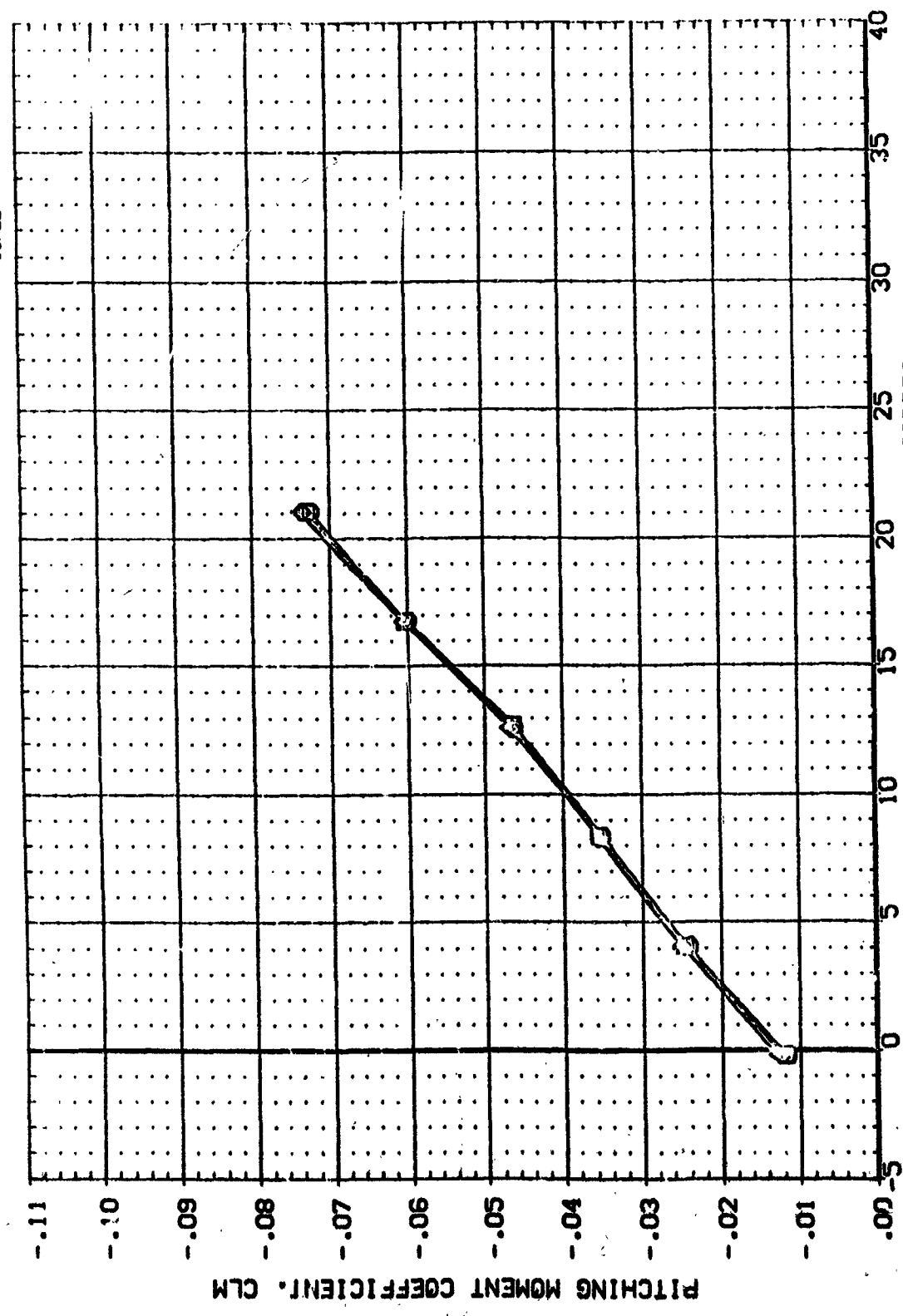


ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 3 MILLION)

(A)MACH = 2.50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RM/L	REFERENCE INFORMATION
(BPM016)	MA-7:UPVT 1031:ROCKWELL PRR ORB. CONF. BVTN1	.000	.000	3.000	SHEET 7245 SC.FT. 12.5
(BPM06)	MA-7:UPVT 1031:ROCKWELL PRR ORB. CONF. BVTN4	.000	.000	3.000	LREF 7.8848
(BPM055)	MA-7:UPVT 1031:ROCKWELL PRR ORB. CONF. BVTN10	.000	.000	3.000	BREF 15.1152
(BPM057)	MA-7:UPVT 1031:ROCKWELL PRR ORB. CONF. BVTN41	.000	.000	3.000	XPRP 12.5510
					YPRP .0000
					ZPRP .0000
					SCALE .0150

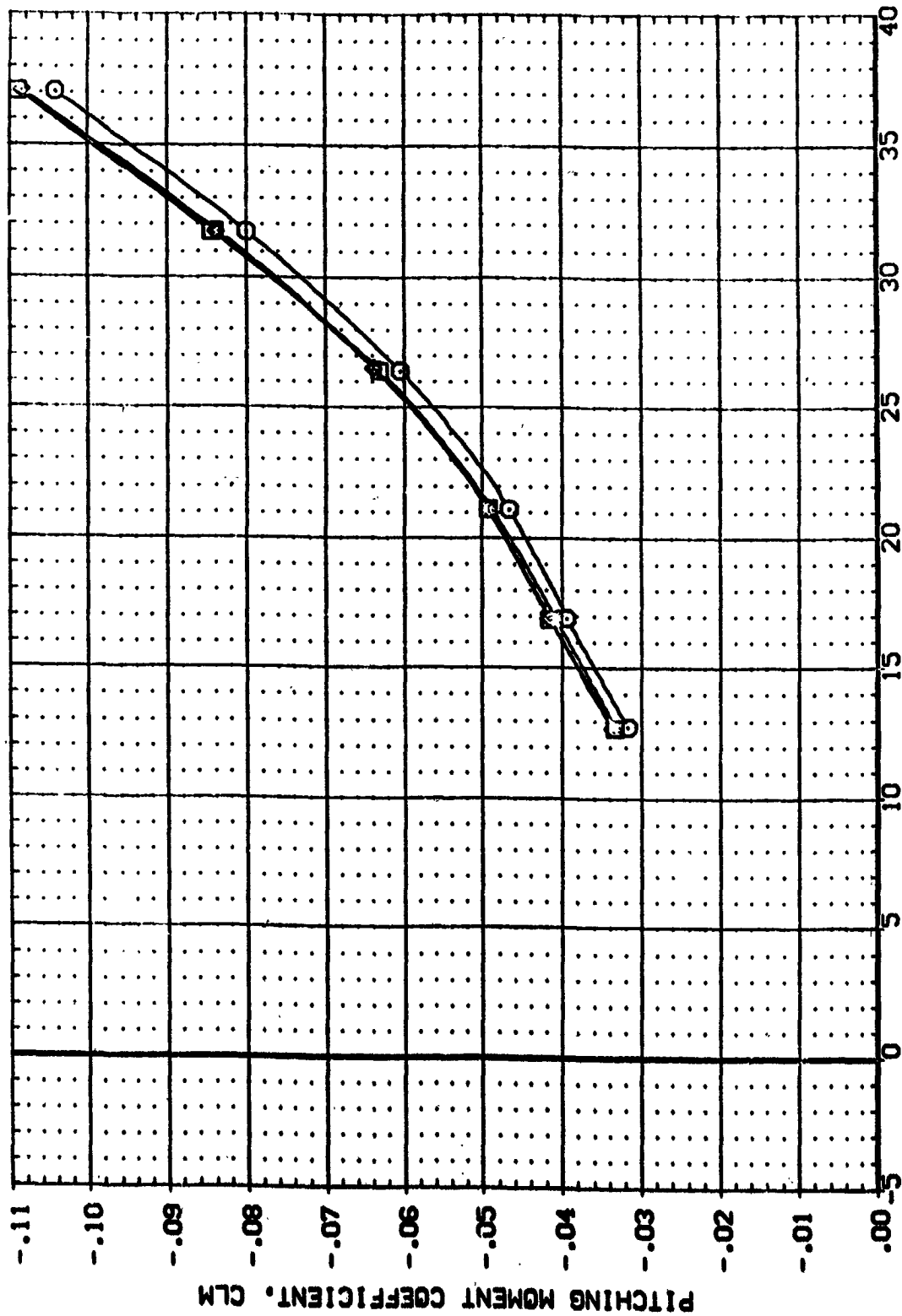


ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RM/L = 3 MILLION)

(B)MACH = 2.95

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPM016)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	SREF 7.745 10. FT.
(BPM036)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	LREF 7.8828 INCHES
(BPM055)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	BREF 15.1152 INCHES
(BPM057)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	XPRP 12.9510 INCHES
					YPRP .0000 INCHES
					ZPRP 6.0000 INCHES
					SCALE .0150



BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 3 MILLION)

(C)MACH = 4.00

DATA SET SYMBOL: (BPH016), (BPH035), (BPH055), (BPH067)

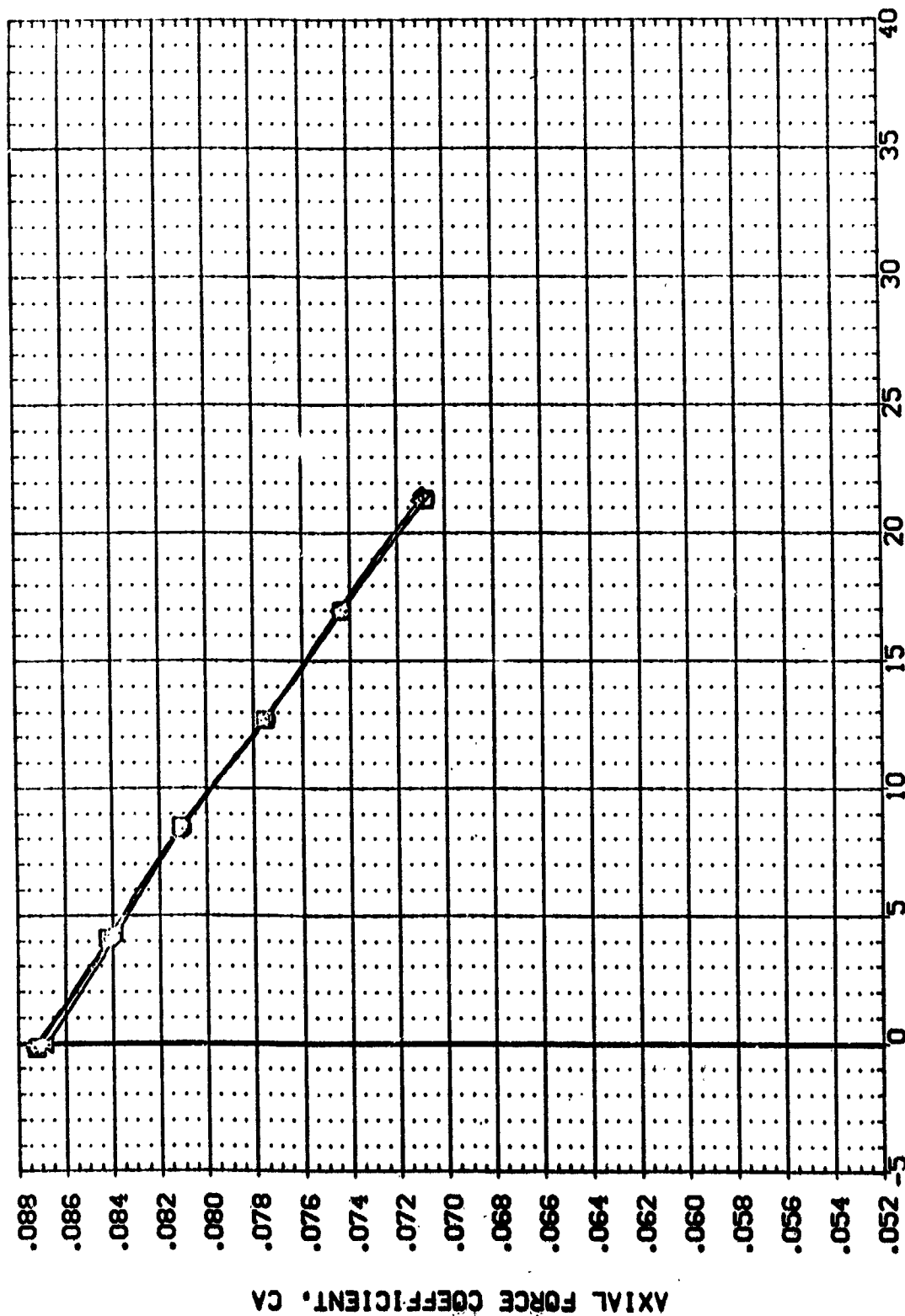
CONFIGURATION DESCRIPTION: MA-7-UPVT 1031, ROCKWELL PRR CR2; MA-7-UPVT 1031, ROCKWELL PRR CR2; MA-7-UPVT 1031, ROCKWELL PRR CR2; MA-7-UPVT 1031, ROCKWELL PRR CR2

BETA: .000, .000, .000, .000

PO-JET: .000, .000, .000, .000

RN/L: 3.000, 3.000, 3.000, 3.000

REFERENCE INFORMATION: SREF: 7.245 INCHES; LREF: 7.828 INCHES; BREF: 15.1152 INCHES; XREF: 12.9510 INCHES; YREF: .0000 INCHES; ZREF: 6.0000 INCHES; SCALE: .0150

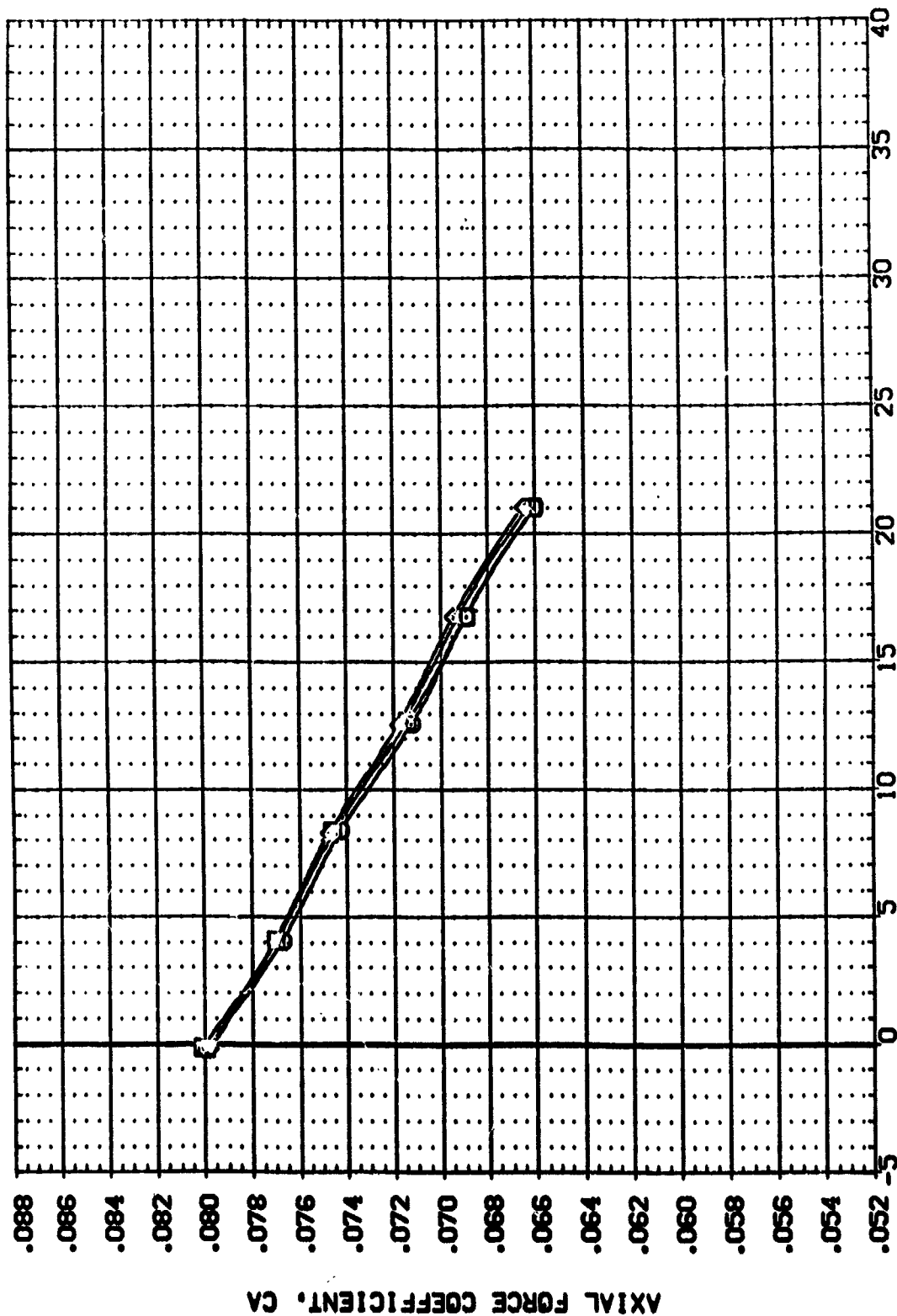


ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 3 MILLION)

(A)MACH = 2.50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPH016)	MA-7-UPVT 1031-POCKWELL PRR CRB. CONF.	.000	.000	3.000	SREF 7245 SO.FT.
(BPH036)	MA-7-UPVT 1031-POCKWELL PRR CRB. CONF.	.000	.000	3.000	LREF 7.8928 INCHES
(BPH055)	MA-7-UPVT 1031-POCKWELL PRR CRB. CONF.	.000	.000	3.000	BREF 15.1152 INCHES
(BPH057)	MA-7-UPVT 1031-POCKWELL PRR CRB. CONF.	.000	.000	3.000	XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



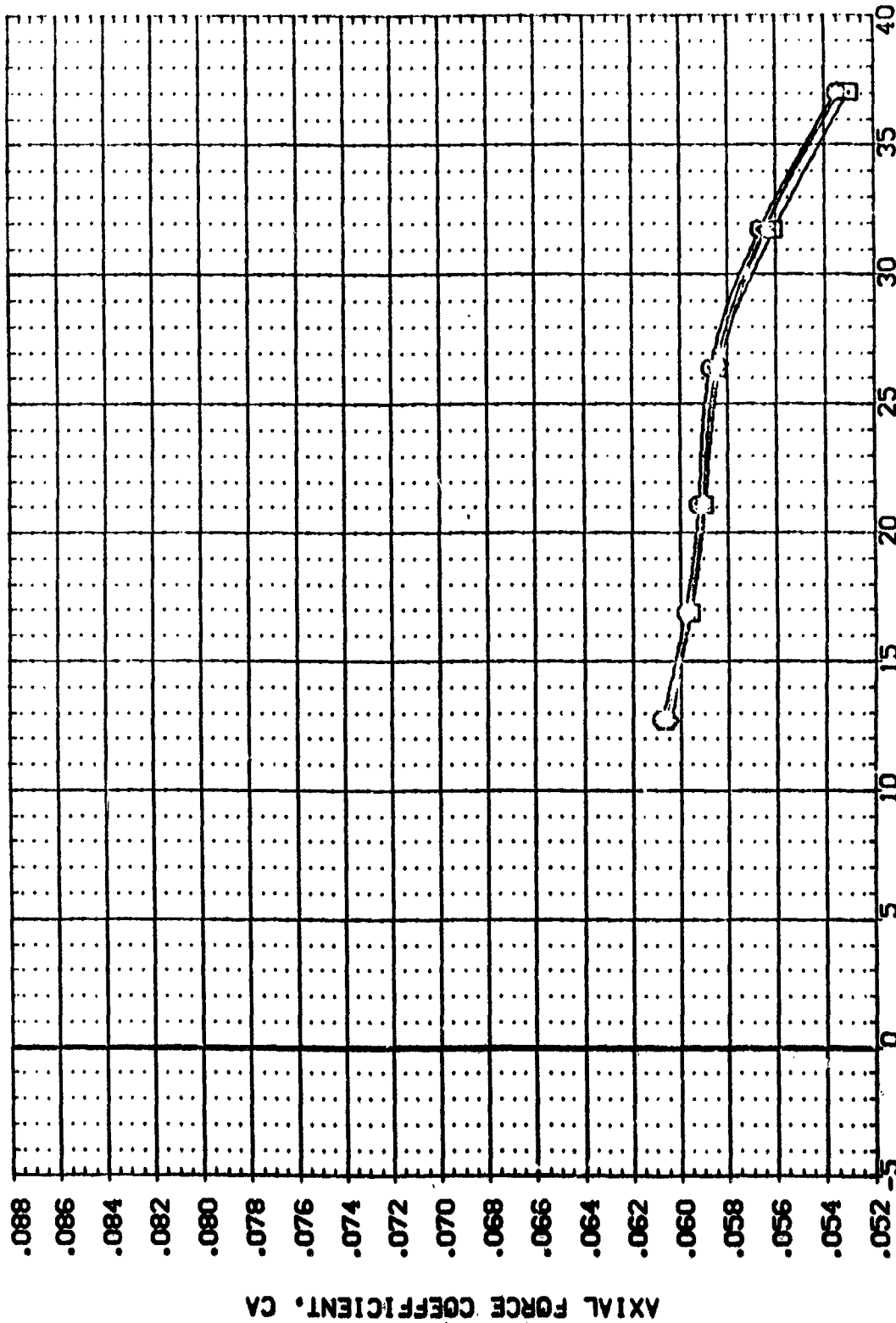
ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

(B)MACH = 2.95



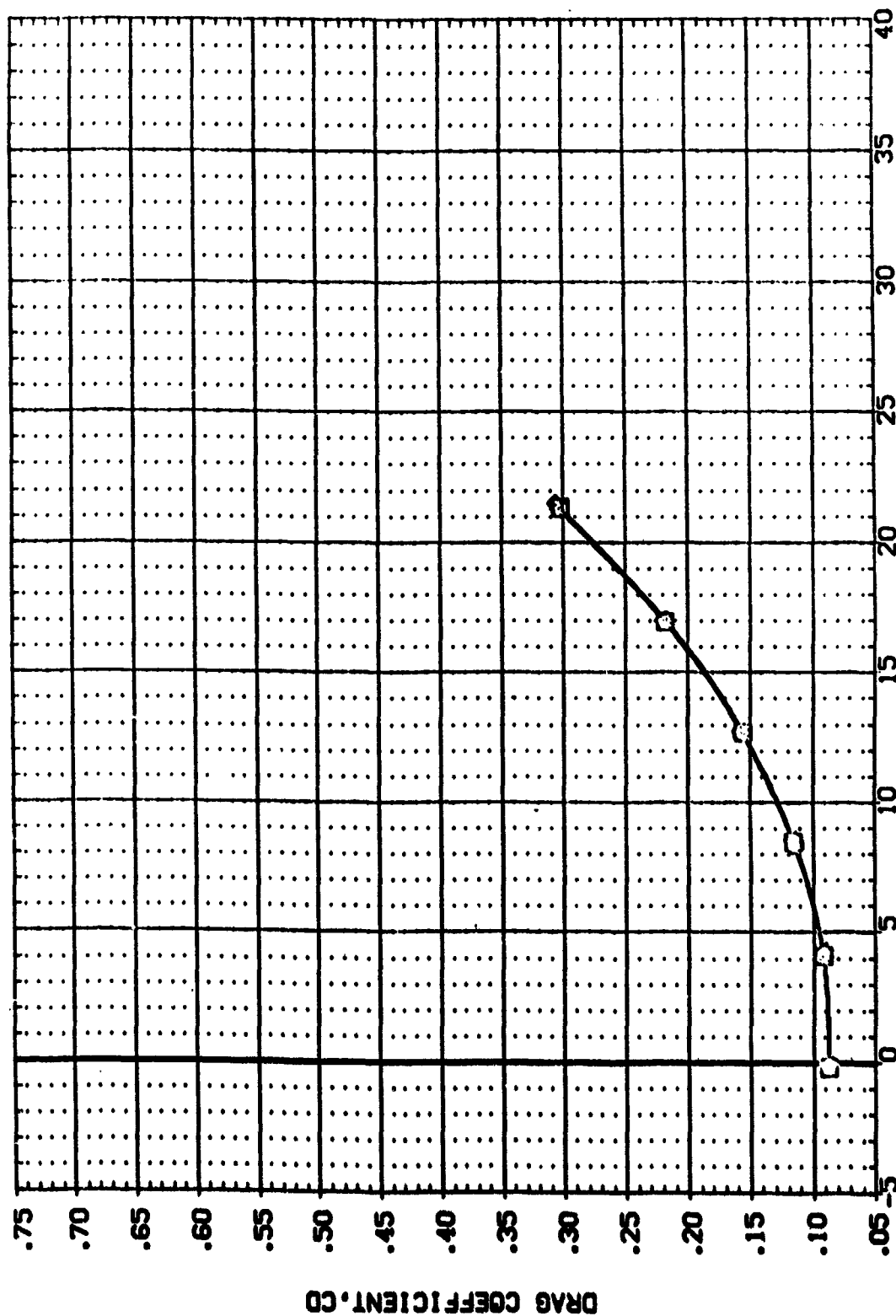
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPT016)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONF: BVTN1	.000	.000	3.000	SREF 7245 SQ. FT.
(BPT036)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONF: BVTN4	.000	.000	3.000	LREF 7.8828 INCHES
(BPT058)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONF: BVTN40	.000	.000	3.000	BREF 15.1152 INCHES
(BPT067)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONF: BVTN41	.000	.000	3.000	XMREF 12.5510 INCHES
					YMREF 6.0000 INCHES
					SCALE .0150 INCHES



BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 3 MILLION)

(C)MACH = 4.00

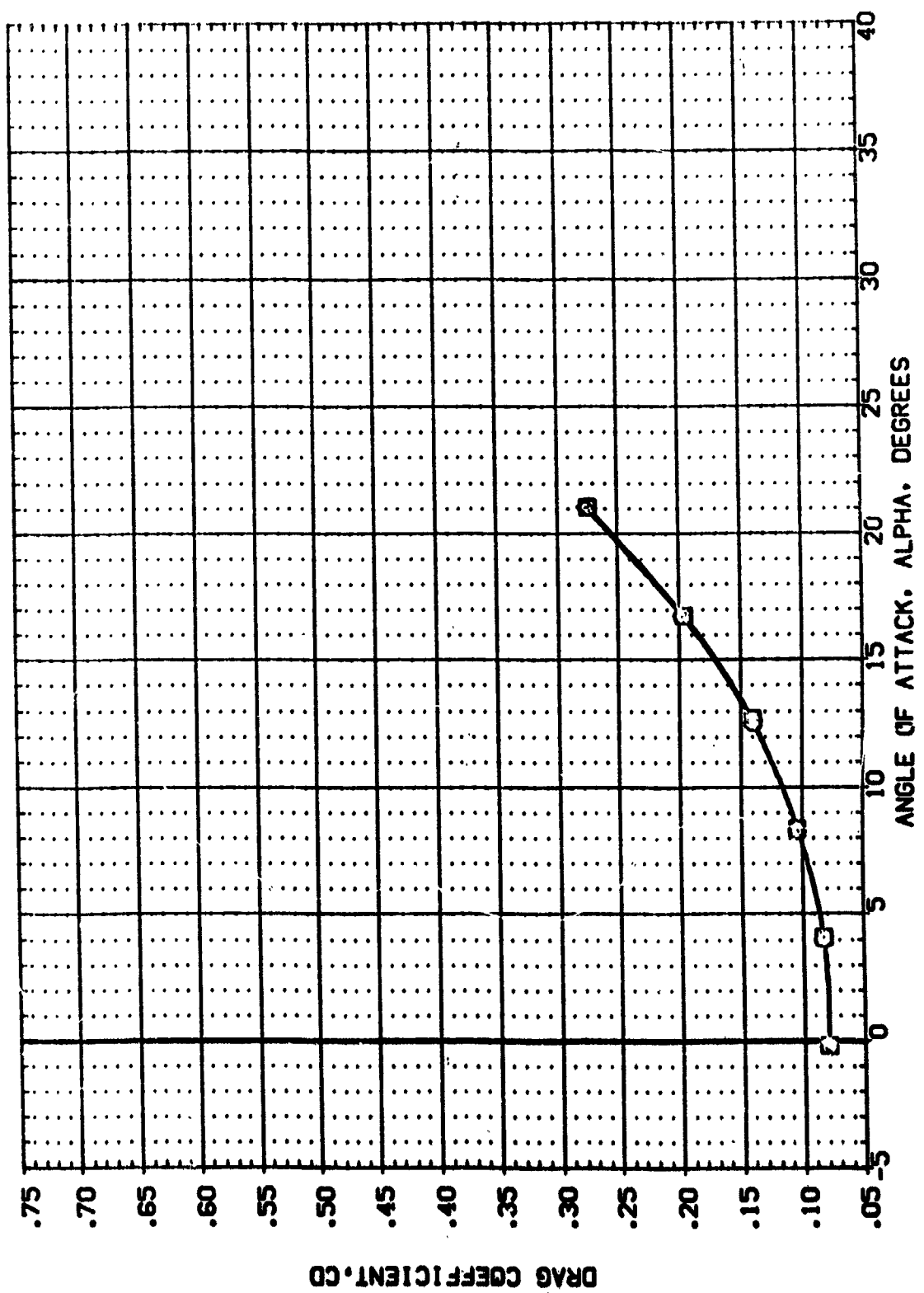
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPH016)	MA-7,UPVT 1031,ROCKWELL PRR 028	.000	.000	3.000	SREF .7245 50.0 FT.
(BPH036)	MA-7,UPVT 1031,ROCKWELL PRR 028	.000	.000	3.000	LREF 7.8828 INCHES
(BPH056)	MA-7,UPVT 1031,ROCKWELL PRR 028	.000	.000	3.000	BREF 15.1152 INCHES
(BPH067)	MA-7,UPVT 1031,ROCKWELL PRR 028	.000	.000	3.000	XCRP 12.9510 INCHES
					YCRP 6.0000 INCHES
					ZCRP .0150 INCHES
					SCALE



BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

(A)MACH = 2.50

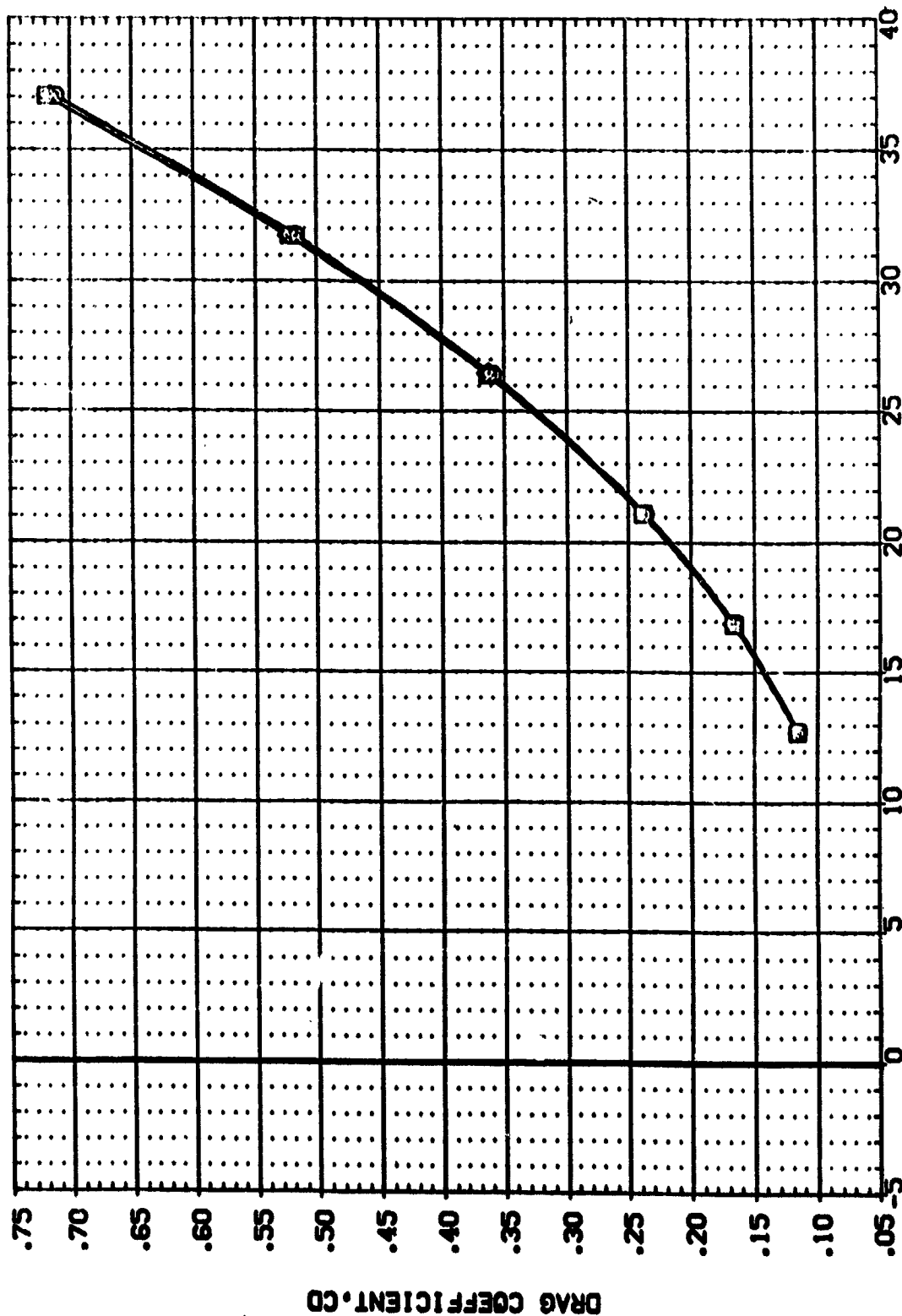
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPM016)	MA-7-LPVT 1031-ROCKWELL PRR CRB. CONF.	.000	.000	3.000	SREF 7.7245 SC.FT.
(BPM036)	MA-7-LPVT 1031-ROCKWELL PRR CRB. CONF.	.000	.000	3.000	LRREF 7.8828 SC.FT.
(BPM055)	MA-7-LPVT 1031-ROCKWELL PRR CRB. CONF.	.000	.000	3.000	BRREF 15.1152 SC.FT.
(BPM067)	MA-7-LPVT 1031-ROCKWELL PRR CRB. CONF.	.000	.000	3.000	XRREF 12.5513 SC.FT.
					YMRP 6.0000 SC.FT.
					ZMRP 6.0000 SC.FT.
					SCALE 0.150



BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 3 MILLION)

(B)MACH = 2.95

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPH016)	MA-7, UPVT 1031, ROCKWELL	.000	.000	3.000	SREF 7245 50. FT.
(BPH036)	MA-7, UPVT 1031, ROCKWELL	.000	.000	3.000	LREF 7.8828 INCHES
(BPH055)	MA-7, UPVT 1031, ROCKWELL	.000	.000	3.000	BREF 15.1152 INCHES
(BPH067)	MA-7, UPVT 1031, ROCKWELL	.000	.000	3.000	XREF 12.9510 INCHES
					WREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150

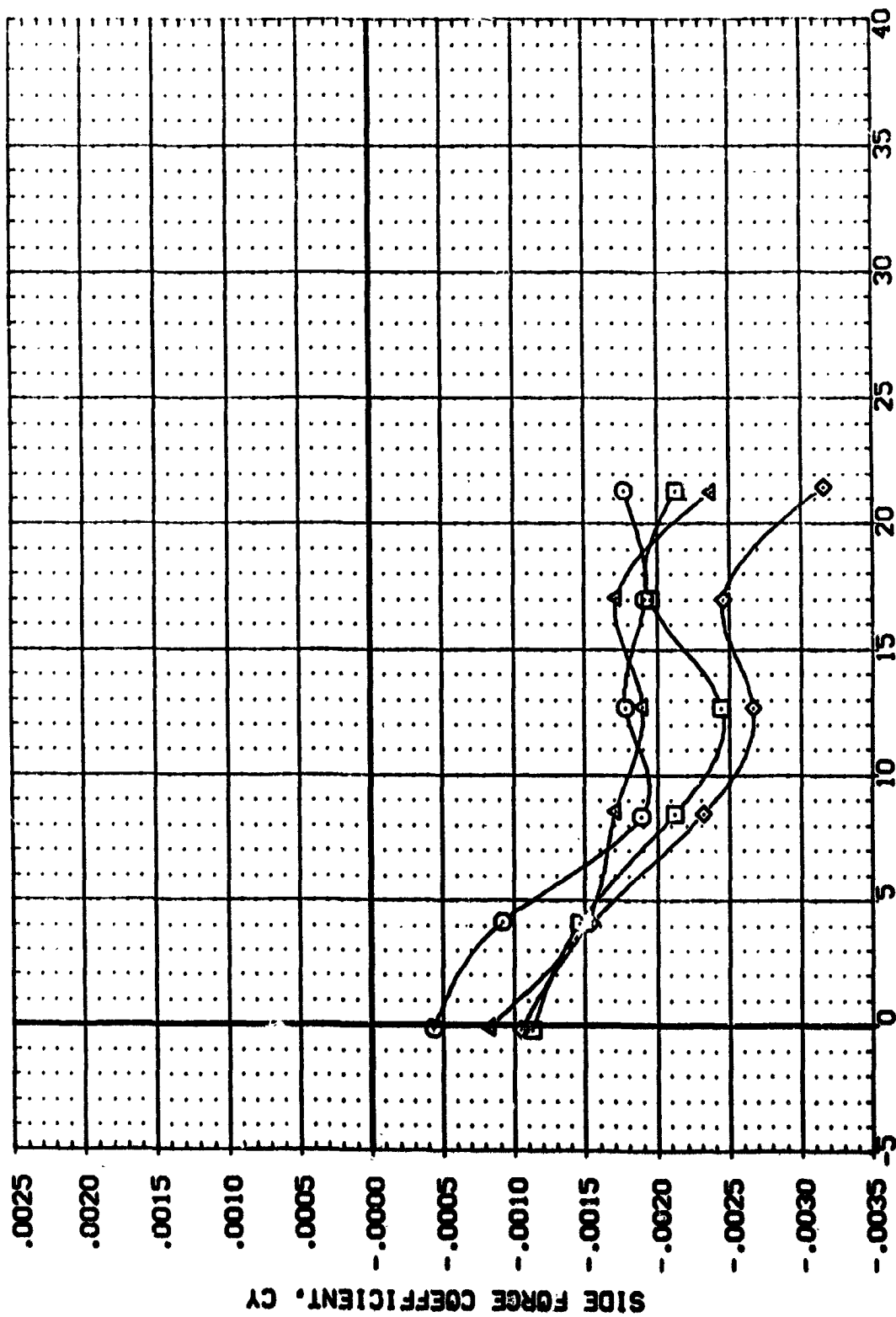


ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 3 MILLION)

(C)MACH = 4.00

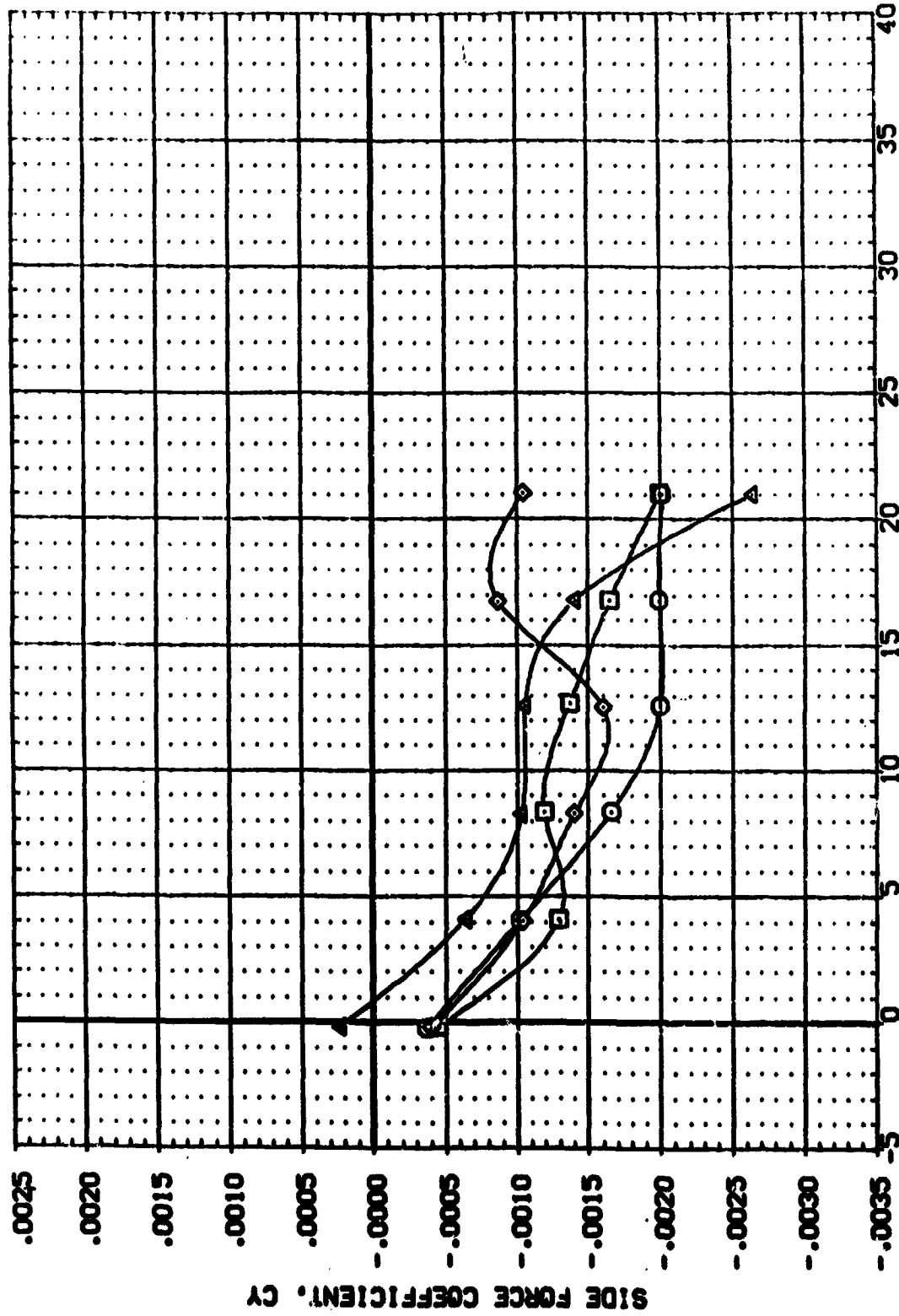
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPH016)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	SREF .7245
(BPH036)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	LREF 7.8828
(BPH035)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	BREF 15.1152
(BPH037)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	XREF 12.9510
					YREF .0000
					ZREF .0000
					SCALE .0150



BASIC CONFIGURATION DATA REPEATIBILITY (RN/L= 3 MILLION)

(A)MACH = 2.50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPO16)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: BUTN1	.000	.000	3.000	SREF 7245 1/2 FT.
(BPO35)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: BUTN4	.000	.000	3.000	LREF 7.8825 INCHES
(BPO35)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: BUTN40	.000	.000	3.000	BREF 5.1152 INCHES
(BPO37)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: BUTN41	.000	.000	3.000	XREF 12.5513 INCHES
					YREF 6.0000 INCHES
					ZREF 6.0000 INCHES
					SCALE 0.050

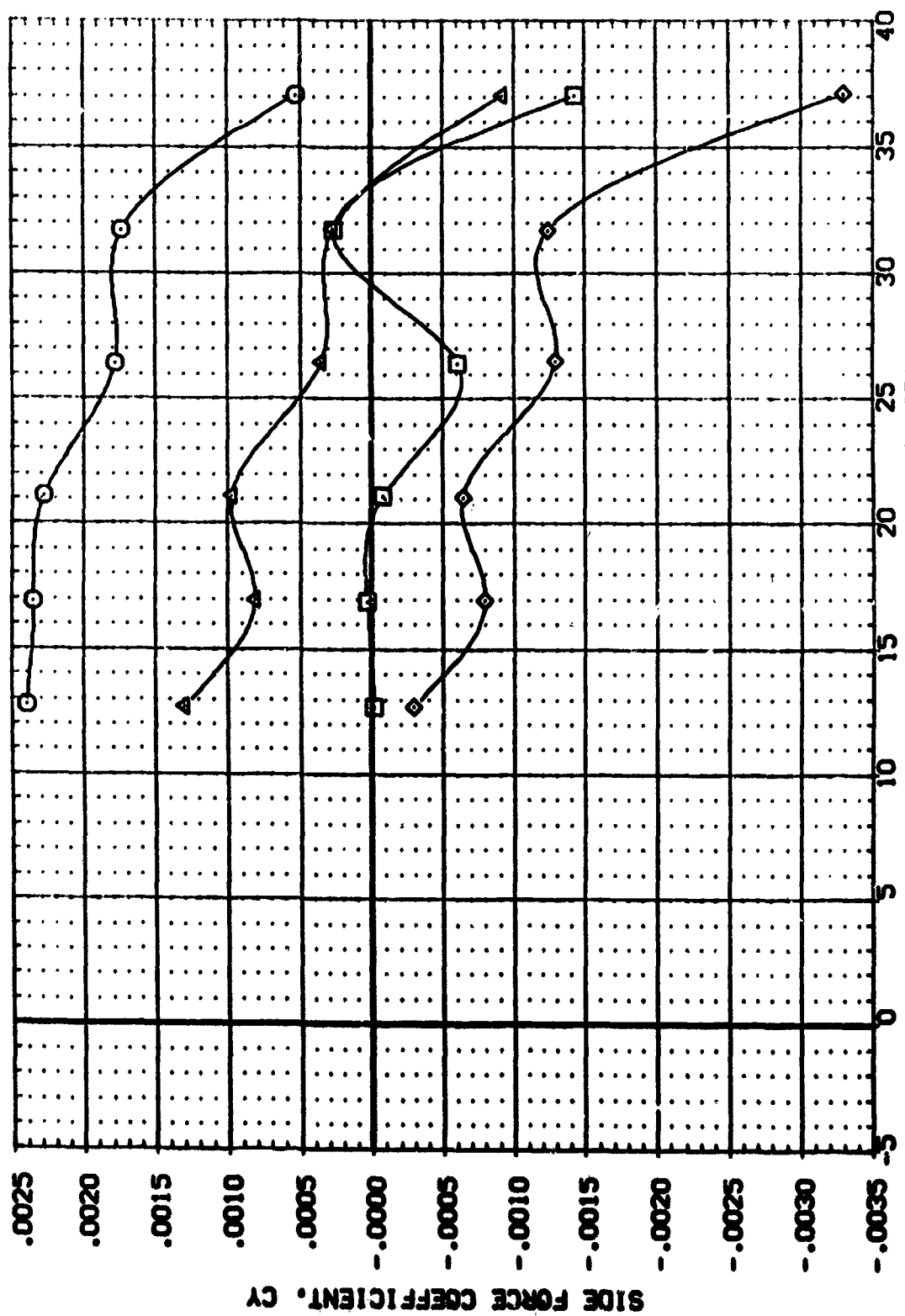


ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

(B)MACH = 2.95

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RN/L	REFERENCE INFORMATION
(BPH015)	MA-7-UPVT 1031-ROCKWELL PRR C88: CNF:	.000	.000	3.000	SREF 7245 SQ.FT.
(BPH016)	MA-7-UPVT 1031-ROCKWELL PRR C28: CNF:	.000	.000	3.000	LREF 7.8828 INCHES
(BPH017)	MA-7-UPVT 1031-ROCKWELL PRR C28: CNF:	.000	.000	3.000	BREF 15.1152 INCHES
(BPH057)	MA-7-UPVT 1031-ROCKWELL PRR C28: CNF:	.000	.000	3.000	YREF 12.9510 INCHES
					ZREF .0000 INCHES
					SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

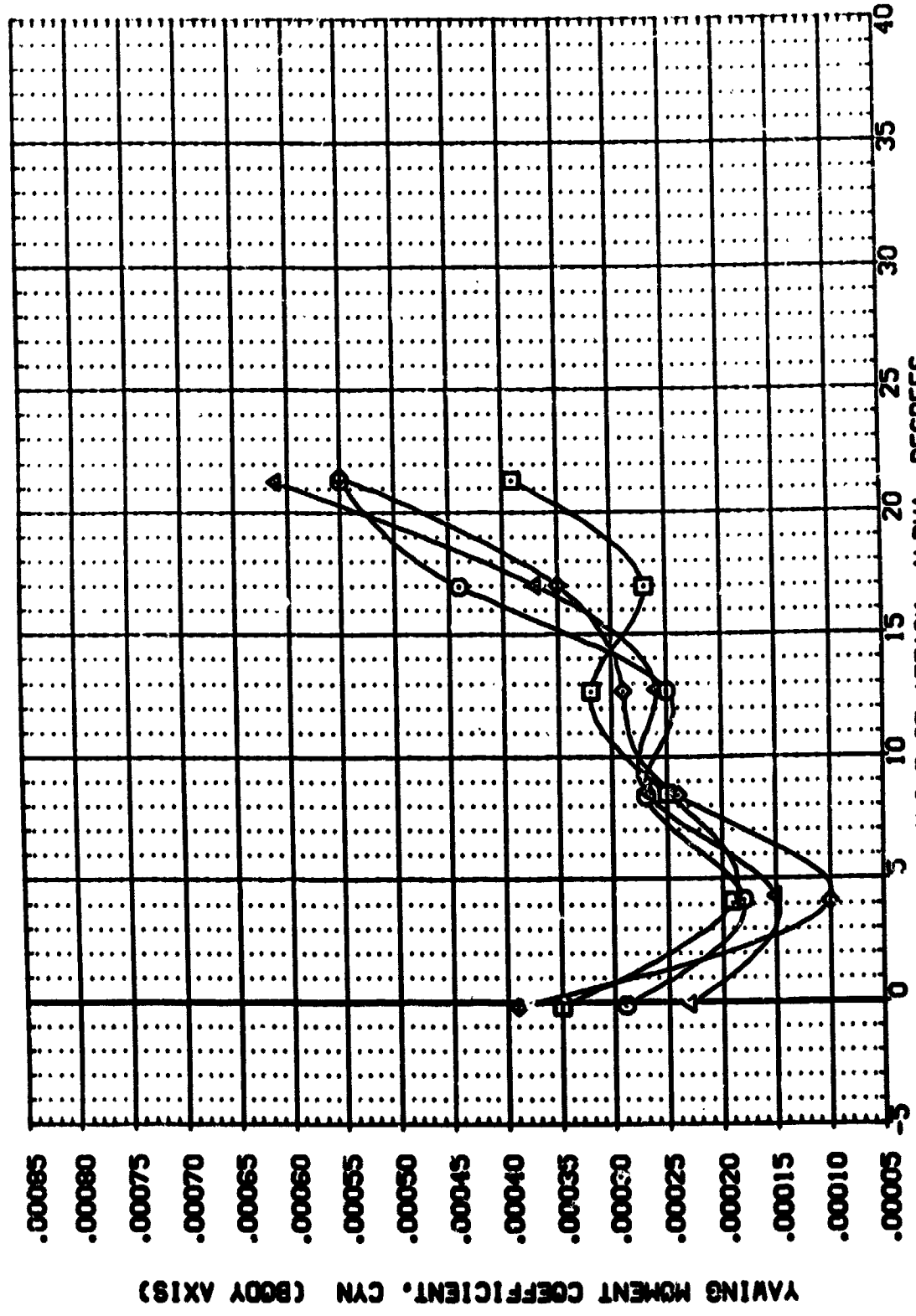
(C)MACH = 4.00



DATA SET SYMOL. C/NF IGRATION DESCRIPTION  
(B7016) MA-7, UPVT 1001, ROCKWELL PAR C/NF  
(B7036) MA-7, UPVT 1001, ROCKWELL PAR C/NF  
(B7056) MA-7, UPVT 1001, ROCKWELL PAR C/NF  
(B7057) MA-7, UPVT 1001, ROCKWELL PAR C/NF

BETA .000 .000 .000 .000  
PO-JET .000 .000 .000 .000  
RV/L 3.000 3.000 3.000 3.000

REFERENCE INFORMATION:  
SREF .7245 SC.FT.  
LREF 7.8828 INCHES  
BREF 15.1152 INCHES  
XREF 12.9510 INCHES  
YREF 6.0000 INCHES  
ZREF .0150 INCHES  
SCALE



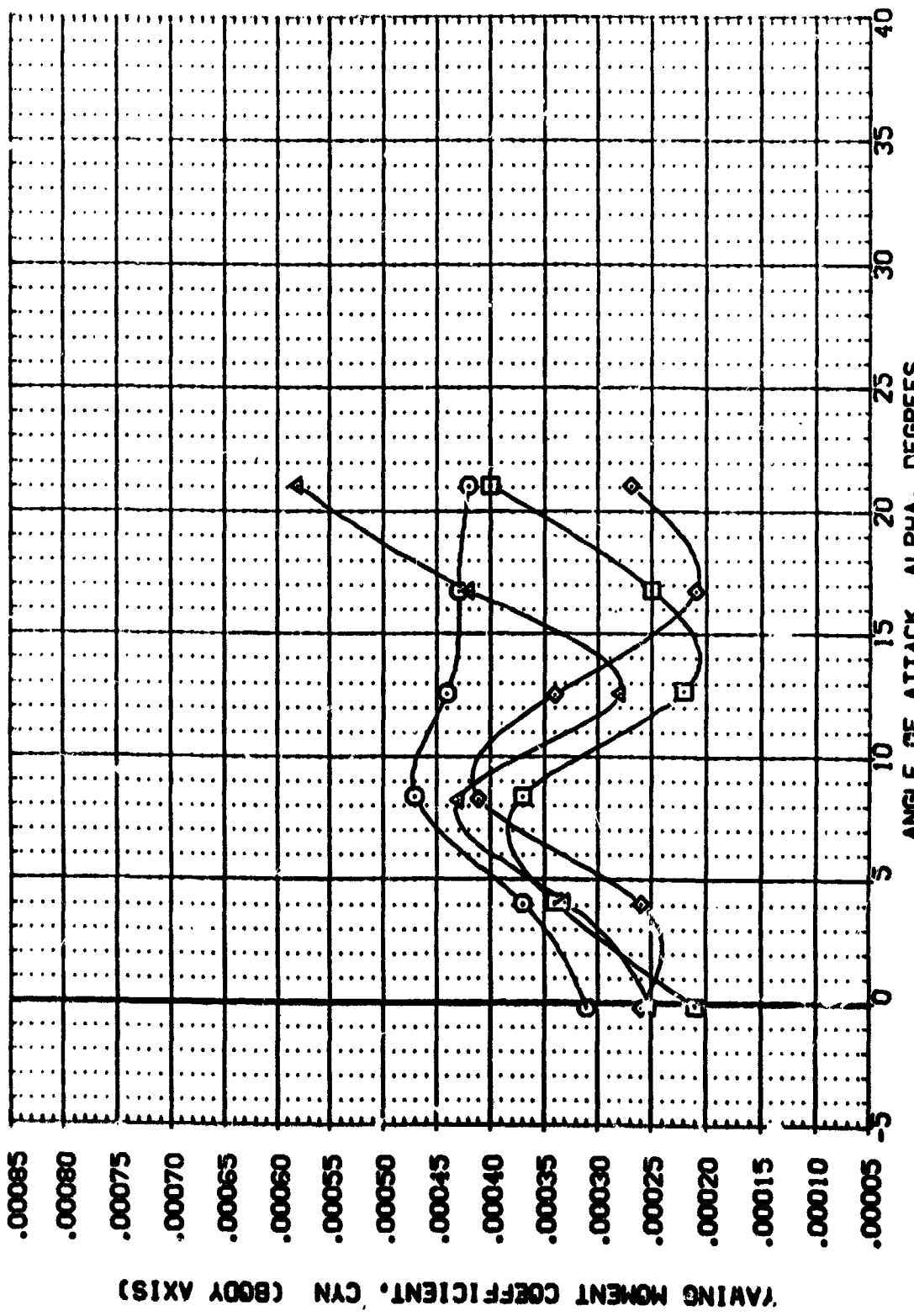
ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L= 3 MILLION)

(A)MACH = 2.50



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPH016)	MA-7.1PVT 1031.ROCKWELL PRR ORB. COF.	.000	.000	3.000	SREF 7245 SQ.FT.
(BPH016)	MA-7.1PVT 1031.ROCKWELL PRR ORB. COF.	.000	.000	3.000	LREF 7.8228 INCHES
(BPH016)	MA-7.1PVT 1031.ROCKWELL PRR ORB. COF.	.000	.000	3.000	BREF 15.1152 INCHES
(BPH016)	MA-7.1PVT 1031.ROCKWELL PRR ORB. COF.	.000	.000	3.000	XPRP 12.9510 INCHES
(BPH016)	MA-7.1PVT 1031.ROCKWELL PRR ORB. COF.	.000	.000	3.000	YPRP 6.0000 INCHES
					ZPRP 6.0000 INCHES
					SCALE 1:150



BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

(B)MACH = 2.95

DATA SET SYMBOL      CONFIGURATION DESCRIPTION      BETA      PO-JET      RN/L      REFERENCE INFORMATION

(B7016)      MA-7-UPVT 1031, ROCKWELL PRR C28, C03      .000      .000      3.000      SREF      7245      50 FT.

(B7016)      MA-7-UPVT 1031, ROCKWELL PRR C28, C03      .000      .000      3.000      LREF      7.8828      INCHES

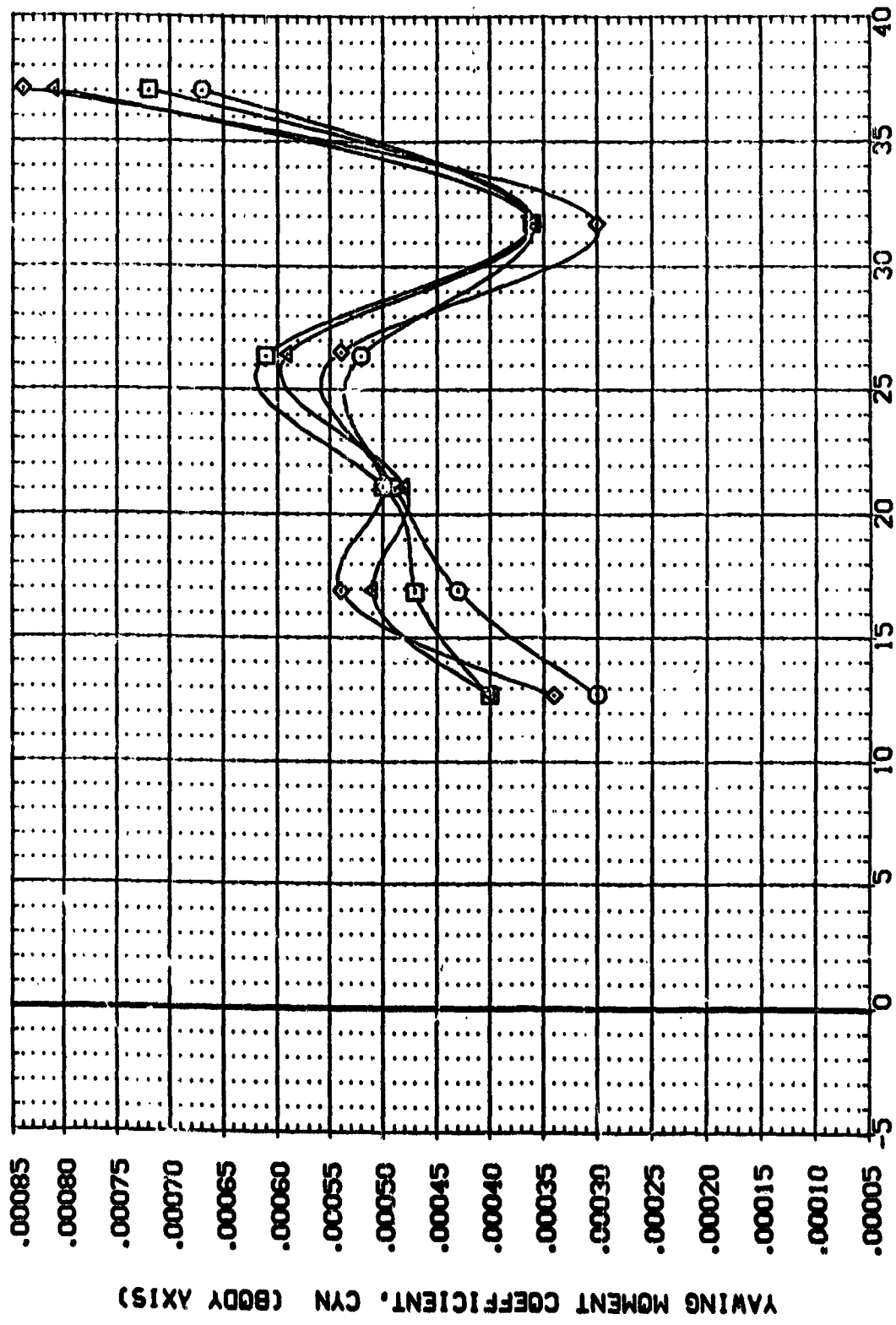
(B7016)      MA-7-UPVT 1031, ROCKWELL PRR C28, C03      .000      .000      3.000      BREF      15.1152      INCHES

(B7016)      MA-7-UPVT 1031, ROCKWELL PRR C28, C03      .000      .000      3.000      XREF      12.9510      INCHES

(B7016)      MA-7-UPVT 1031, ROCKWELL PRR C28, C03      .000      .000      3.000      YREF      6.0000      INCHES

(B7016)      MA-7-UPVT 1031, ROCKWELL PRR C28, C03      .000      .000      3.000      ZREF      6.0000      INCHES

(B7016)      MA-7-UPVT 1031, ROCKWELL PRR C28, C03      .000      .000      3.000      SCALE      .0150



ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 3 MILLION)

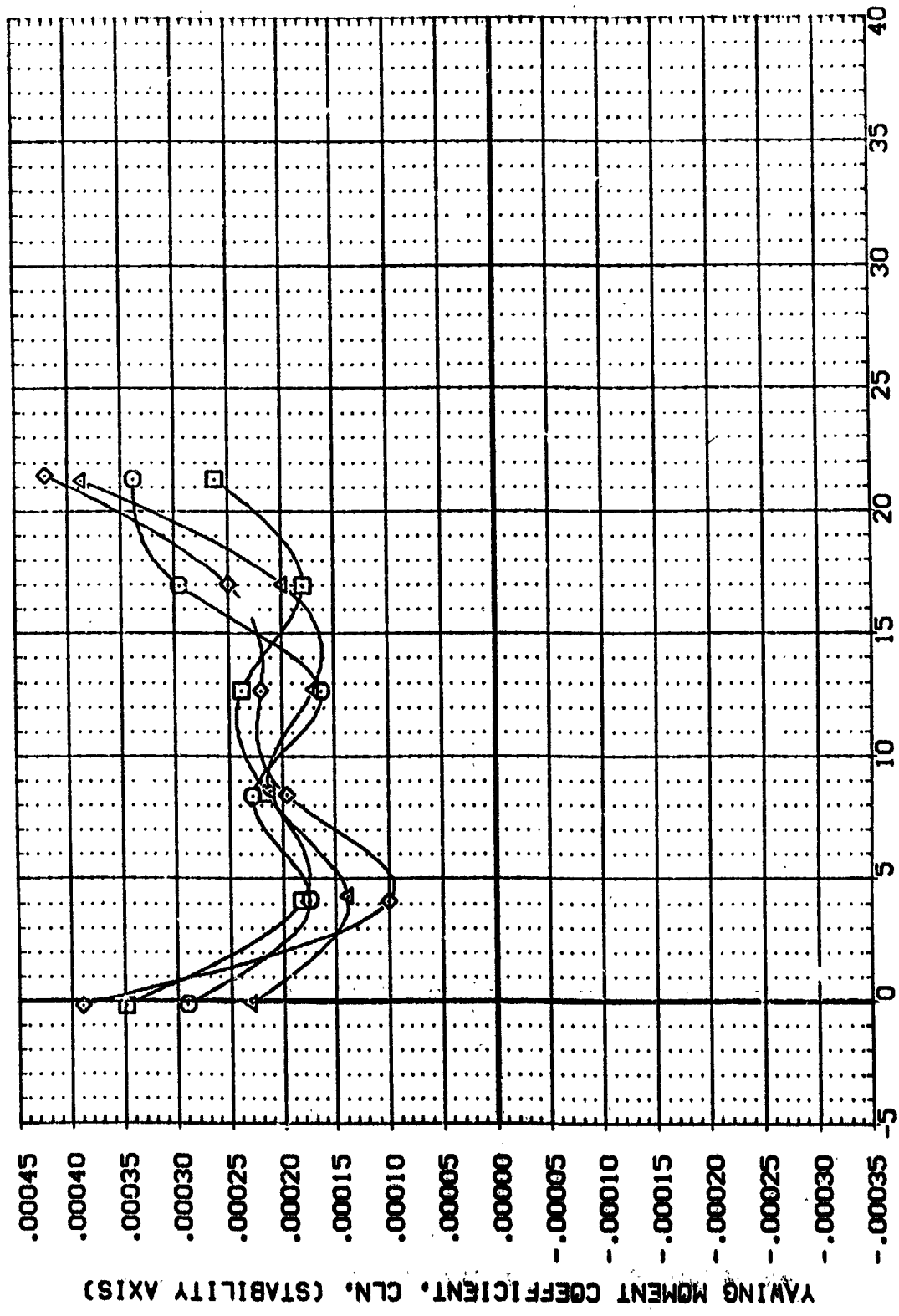
(C)MACH = 4.00

REFERENCE INFORMATION  
 SREF 7245 SC.F.T.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XWRP 12.9510 INCHES  
 YWRP 6.0000 INCHES  
 ZWRP 6.0150 INCHES  
 SCALE

BETA PG-JET RV/L  
 .000 .000 3.000  
 .000 .000 3.000  
 .000 .000 3.000

BVTN1 BVTN4  
 BVTN40 BVTN41

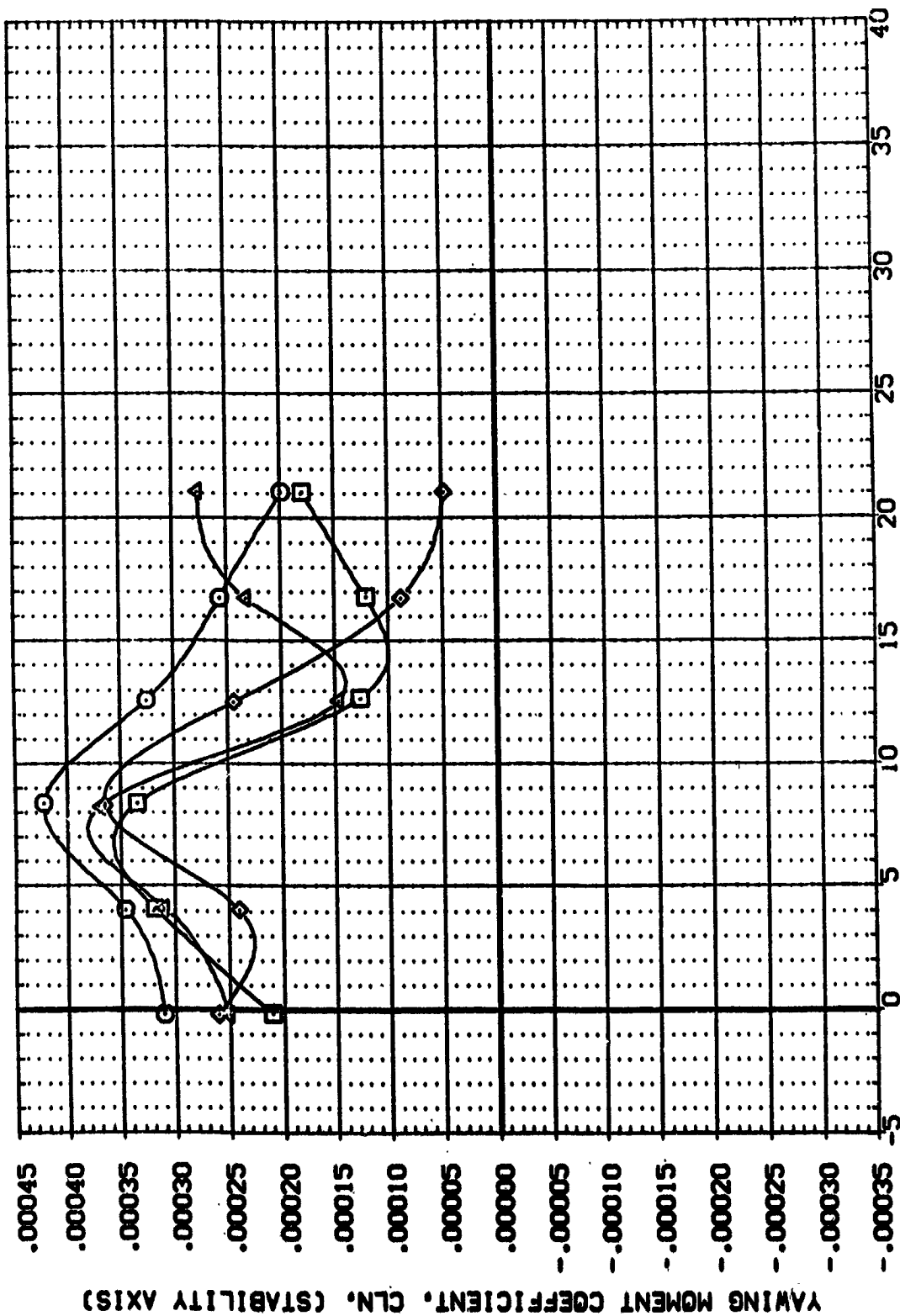
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BPM016) MA-7-LPVT 1031-ROCKVELL PRR ORB CONF  
 (BPM036) MA-7-LPVT 1031-ROCKVELL PRR ORB CONF  
 (BPM055) MA-7-LPVT 1031-ROCKVELL PRR ORB CONF  
 (BPM067) MA-7-LPVT 1031-ROCKVELL PRR ORB CONF



ANGLE OF ATTACK, ALPHA, DEGREES  
 BASIC CONFIGURATION DATA REPEATABILITY (RV/L = 3 MILLION)

(A)MACH = 2.50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BP016)	MA-7, UPVT 1031, ROCKWELL PRR 038, CONF.	.000	.000	3.000	SREF 7245 SQ. FT.
(BP035)	MA-7, UPVT 1031, ROCKWELL PRR 038, CONF.	.000	.000	3.000	LREF 7.6828 INCHES
(BP035)	MA-7, UPVT 1031, ROCKWELL PRR 038, CONF.	.000	.000	3.000	BREF 15.1152 INCHES
(BP067)	MA-7, UPVT 1031, ROCKWELL PRR 038, CONF.	.000	.000	3.000	XREF 12.9510 INCHES
					YREF 6.0000 INCHES
					ZREF 6.0150 INCHES
					SCALE



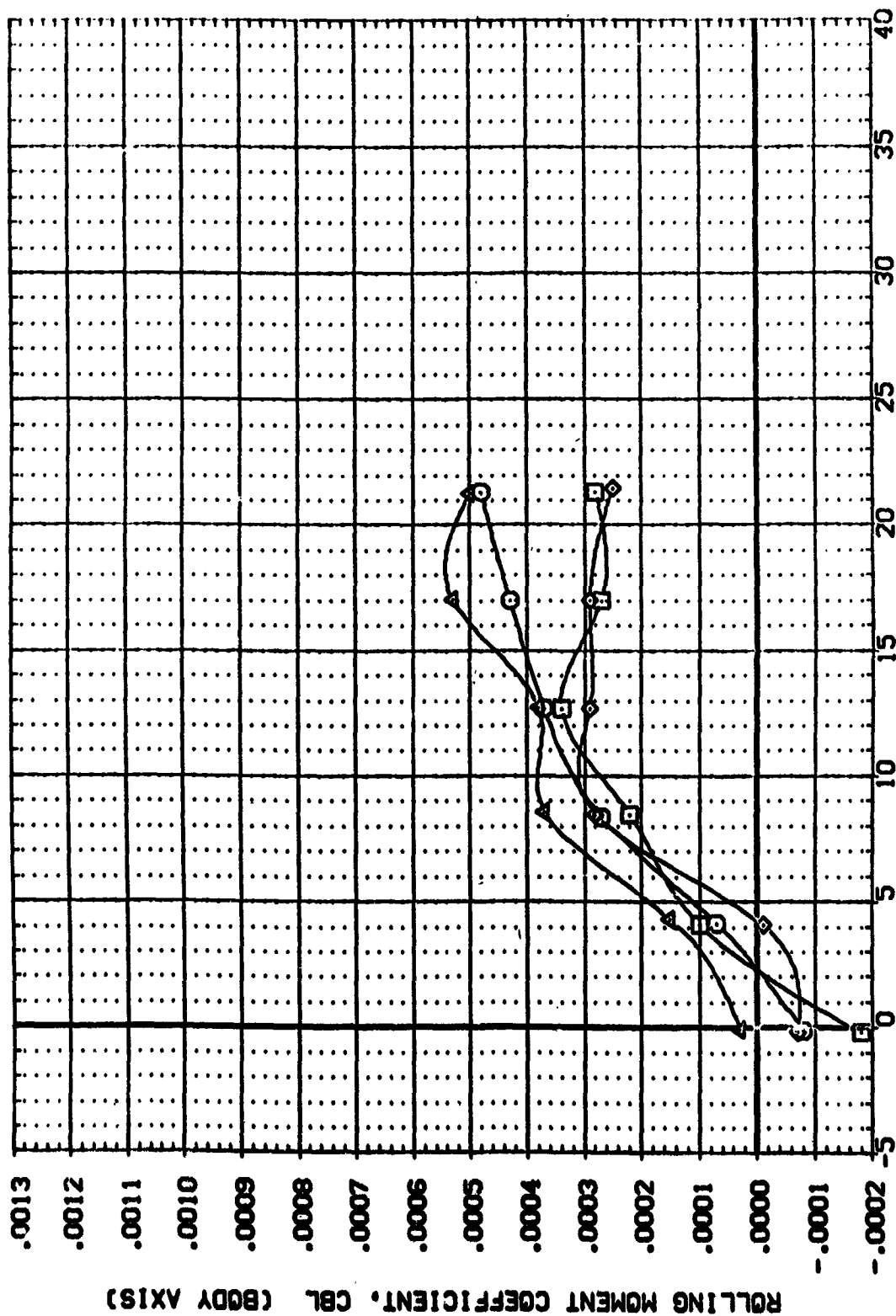
ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

(B)MACH = 2.95



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RN/L	REFERENCE INFORMATION
(BPM016)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	SREF 7245 SO.FT.
(BPM035)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	LREF 7.8828 INCHES
(BPM055)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	BREF 15.1152 INCHES
(BPM057)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	3.000	XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

(A)MACH = 2.50

DATA SET SYMBOL: (BPM016) (BPM036) (BPM057)

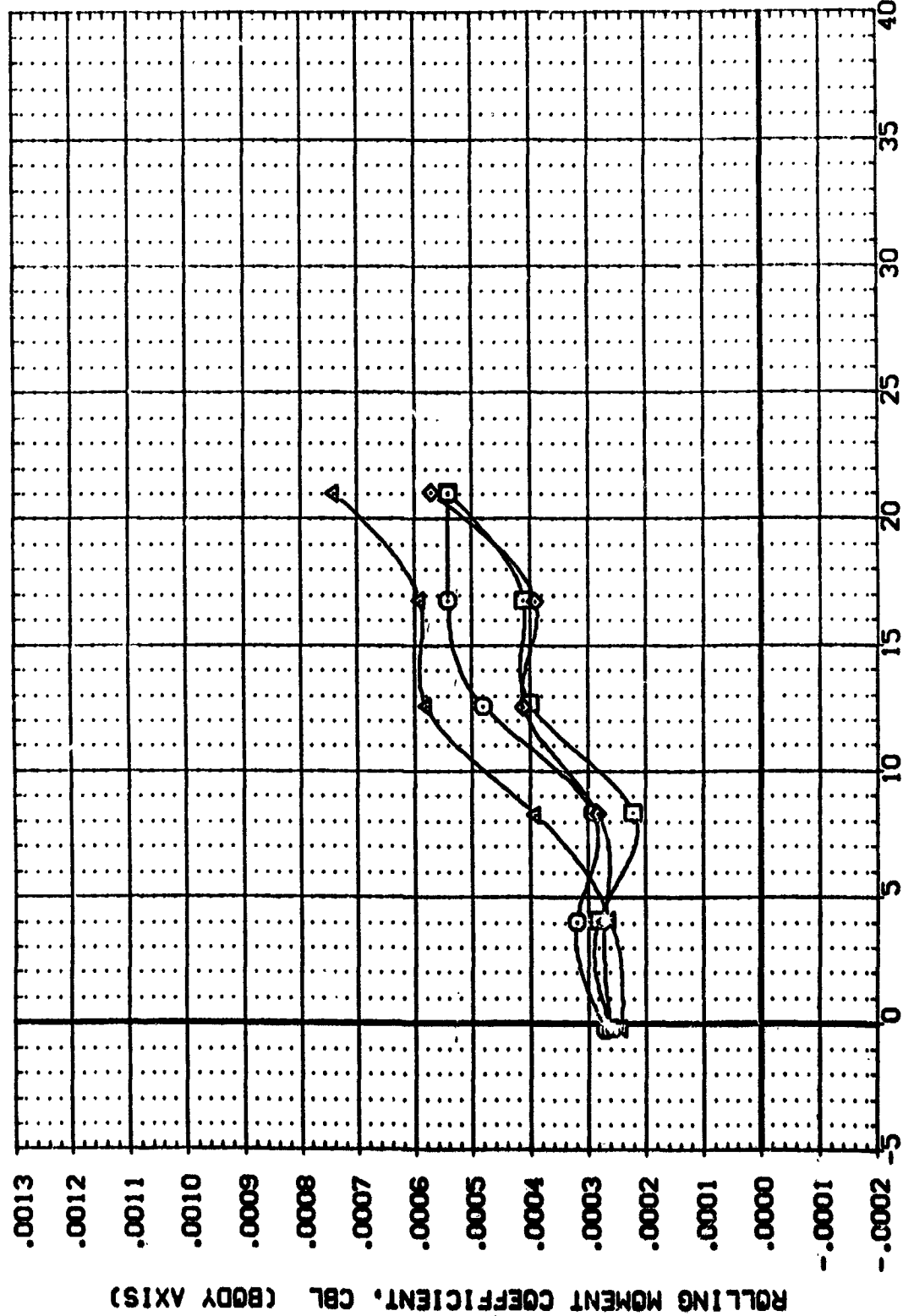
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BETA: .000 .000 .000 .000

PO-JET: .000 .000 .000 .000

RN/L: 3.000 3.000 3.000 3.000

REFERENCE INFORMATION: SREF: .7245 SQ.FT. LREF: 7.8828 INCHES BREF: 15.1132 INCHES XREF: 12.9510 INCHES YREF: .0000 INCHES ZREF: 6.0000 INCHES SCALE: .0150



ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L= 3 MILLION)

(B)MACH = 2.95

DATA SET SYMBOL: (BPH015) (BPH035) (BPH055) (BPH067)

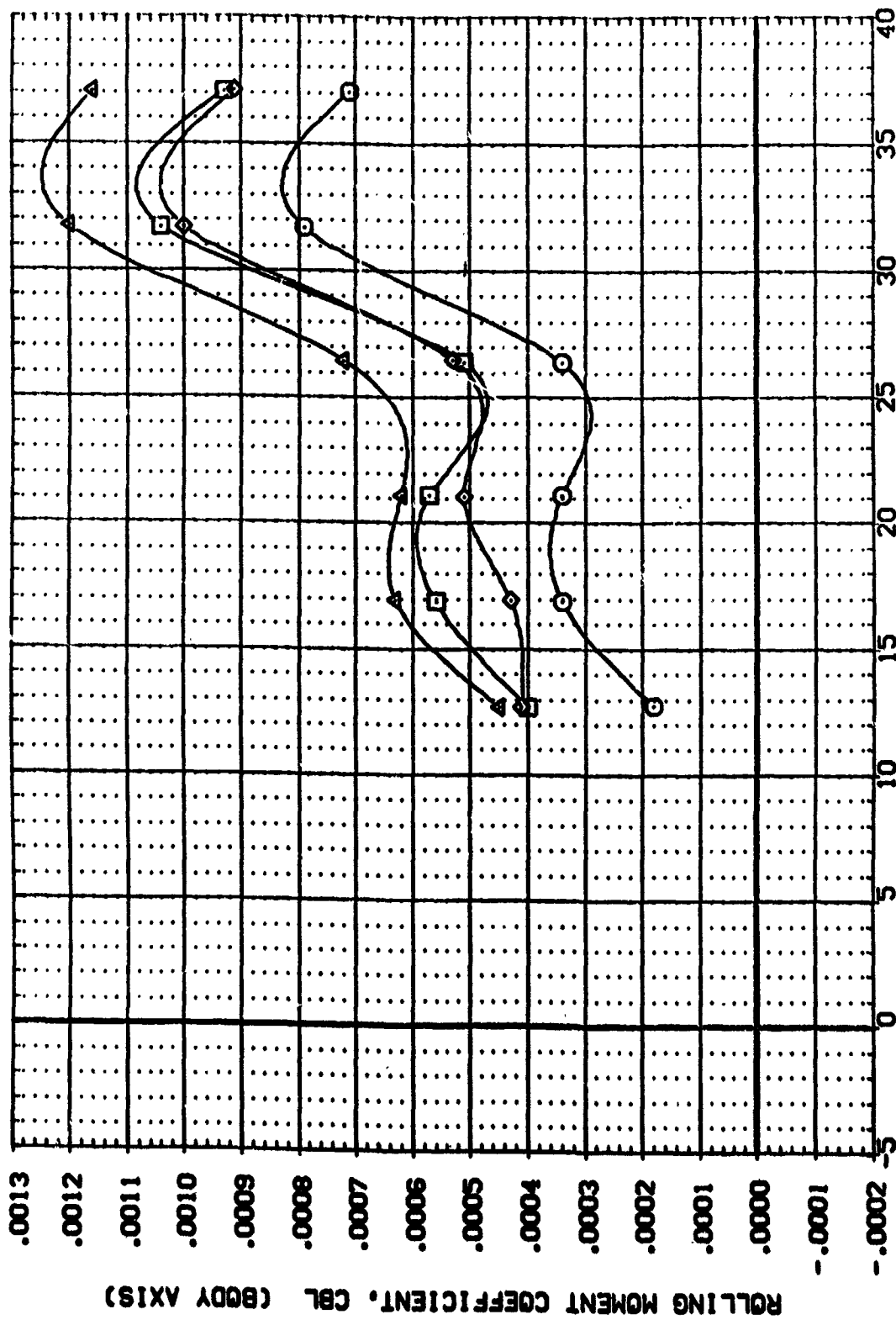
CONFIGURATION DESCRIPTION: MA-7-UPVT 1031-ROCKWELL PRR ORB. CO.F. COV. MA-7-UPVT 1031-ROCKWELL PRR ORB. COV. MA-7-UPVT 1031-ROCKWELL PRR ORB. COV. MA-7-UPVT 1031-ROCKWELL PRR ORB. COV.

BETA: .000 .000 .000 .000

PO-JET: .000 .000 .000 .000

RN/L: 3.000 3.000 3.000 3.000

REFERENCE INFORMATION: SREF 7245 SQ.FT. LREF 7.8828 INCHES BREF 15.1152 INCHES XMRP 12.9510 INCHES YMRP .0000 INCHES ZMRP 6.0000 INCHES SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

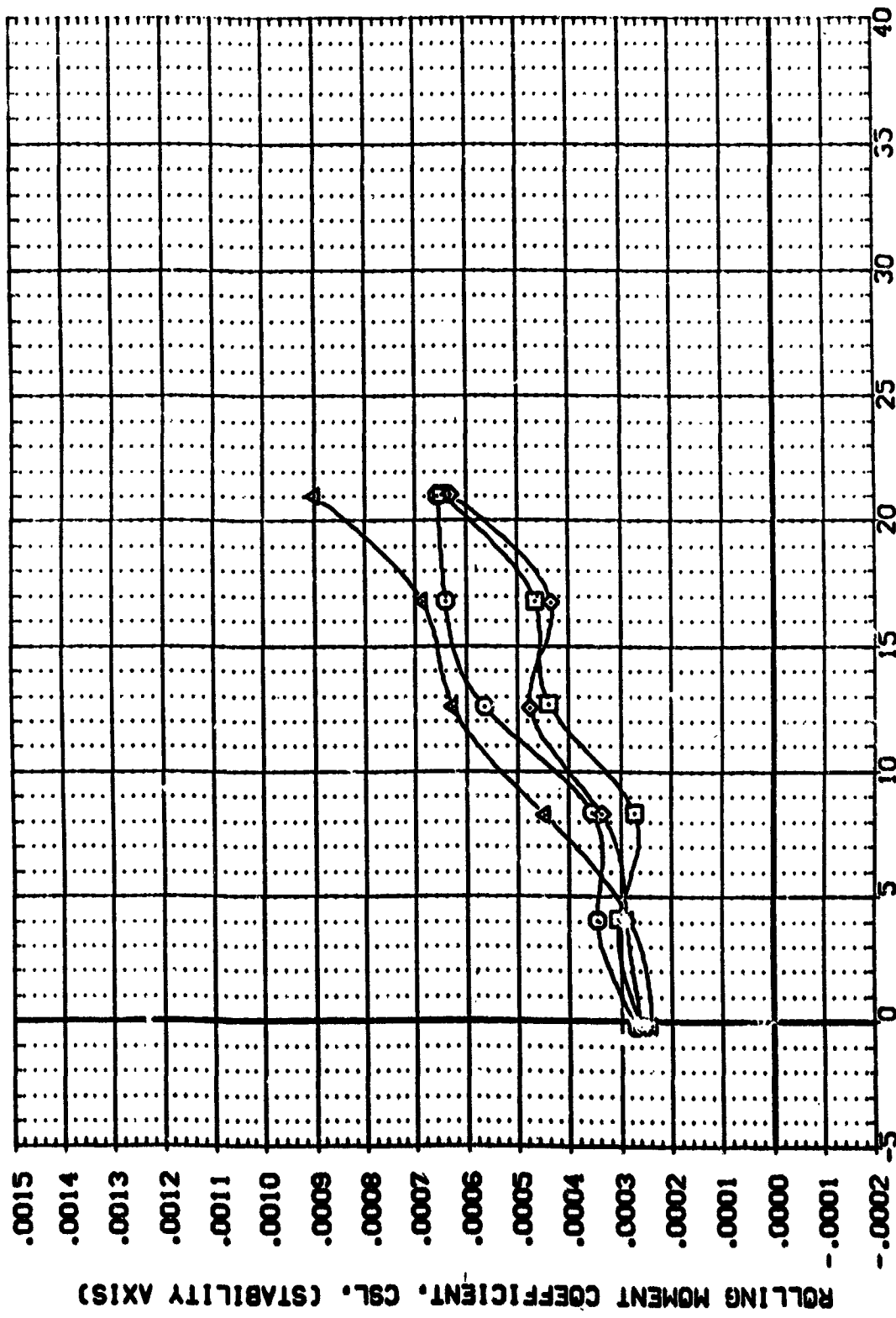
BASIC CONFIGURATION DATA REPEATIBILITY (RN/L= 3 MILLION)

(C)MACH = 4.00





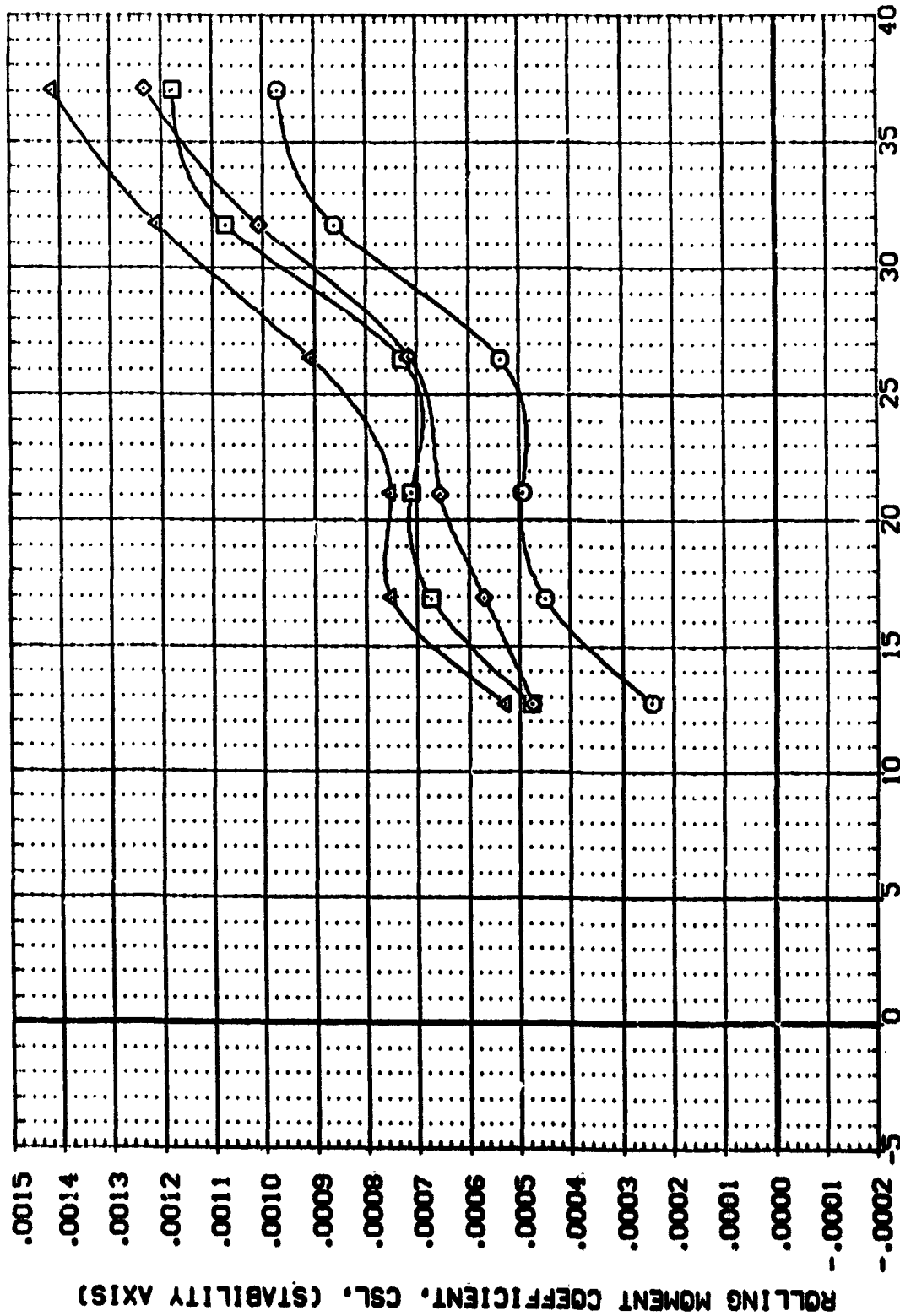
DATA SET SYMBO	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPH015)	MA-7-UPVT 1031: RORVELL PRR ORB: CONF: BVTN1	.000	.000	3.000	SREF 7.245 50. FT
(BPH016)	MA-7-UPVT 1031: RORVELL PRR ORB: CONF: BVTN4	.000	.000	3.000	LREF 7.8828 INCHES
(BPH017)	MA-7-UPVT 1031: RORVELL PRR ORB: CONF: BVTN40	.000	.000	3.000	EREF 15.1152 INCHES
(BPH018)	MA-7-UPVT 1031: RORVELL PRR ORB: CONF: BVTN41	.000	.000	3.000	XMRP 12.9510 INCHES
(BPH019)	MA-7-UPVT 1031: RORVELL PRR ORB: CONF: BVTN41	.000	.000	3.000	YMRP 6.0000 INCHES
(BPH020)	MA-7-UPVT 1031: RORVELL PRR ORB: CONF: BVTN41	.000	.000	3.000	ZMRP 6.0000 INCHES
(BPH021)	MA-7-UPVT 1031: RORVELL PRR ORB: CONF: BVTN41	.000	.000	3.000	SCALE .0150



BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

(B)MACH = 2.95

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPH016)	MA-7, UPVT 1031, ROCKWELL PRR CR8	.000	.000	3.000	SREF 7245 23. FT.
(BPH016)	MA-7, UPVT 1031, ROCKWELL PRR CR8	.000	.000	3.000	LREF 7.8828 INCHES
(BPH016)	MA-7, UPVT 1031, ROCKWELL PRR CR8	.000	.000	3.000	BREF 15.1152 INCHES
(BPH016)	MA-7, UPVT 1031, ROCKWELL PRR CR8	.000	.000	3.000	YMRP 12.5310 INCHES
(BPH016)	MA-7, UPVT 1031, ROCKWELL PRR CR8	.000	.000	3.000	ZMRP 6.0000 INCHES
					SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 3 MILLION)

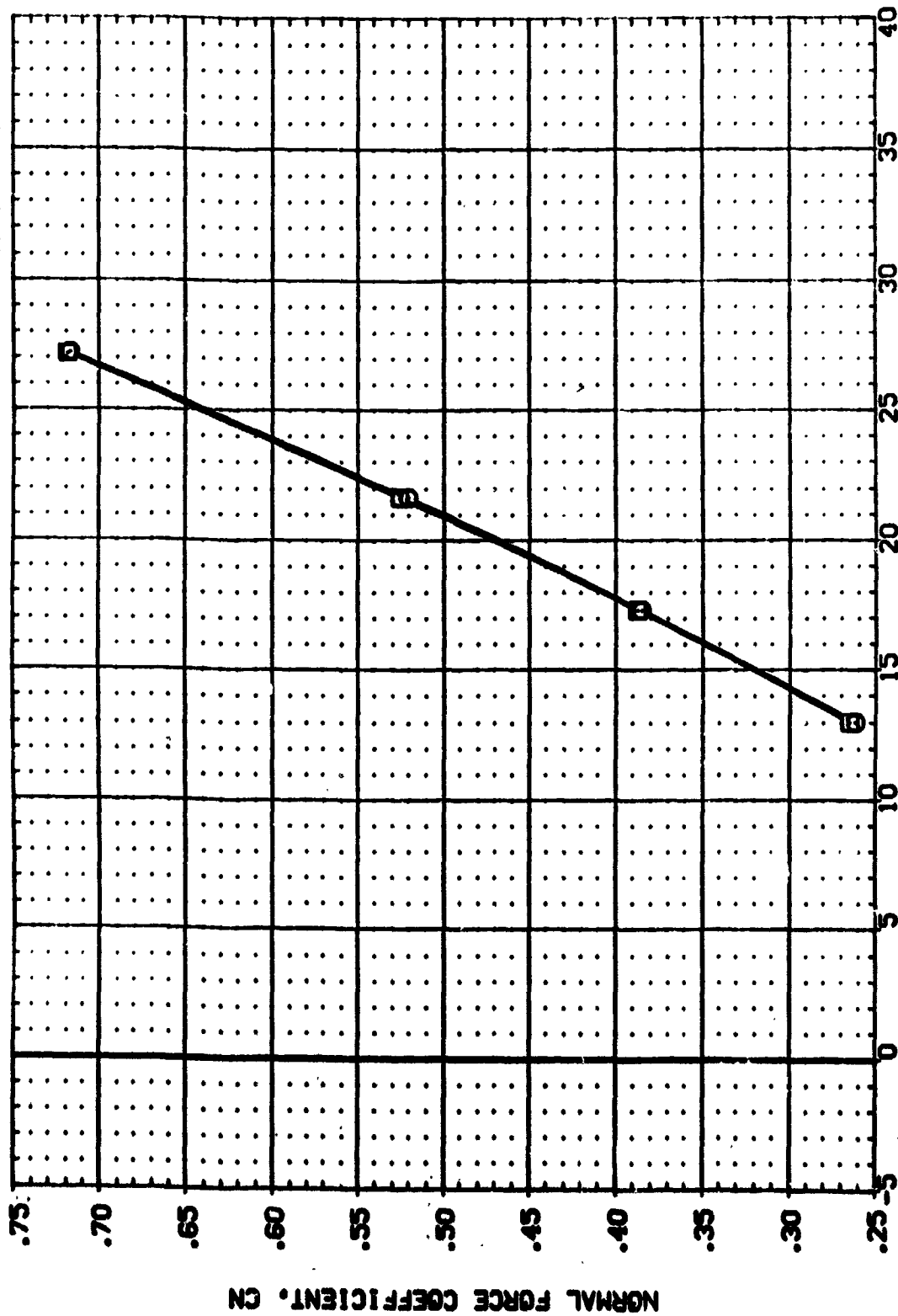
(C)MACH = 4.00



DATA SET SYMBOL: MA-7-UPVT 1031. ROCKWELL PER ORB. CONF: BVTN1  
(CPND23) MA-7-UPVT 1031. ROCKWELL PER ORB. CONF: BVTN4  
(CPND44)

REFERENCE INFORMATION:  
SREF: .7245 50. FT.  
LREF: 7.8828 INCHES  
BREF: 15.1152 INCHES  
XTRP: 12.9510 INCHES  
YTRP: .0000 INCHES  
ZTRP: 6.0000 INCHES  
SCALE: .0150

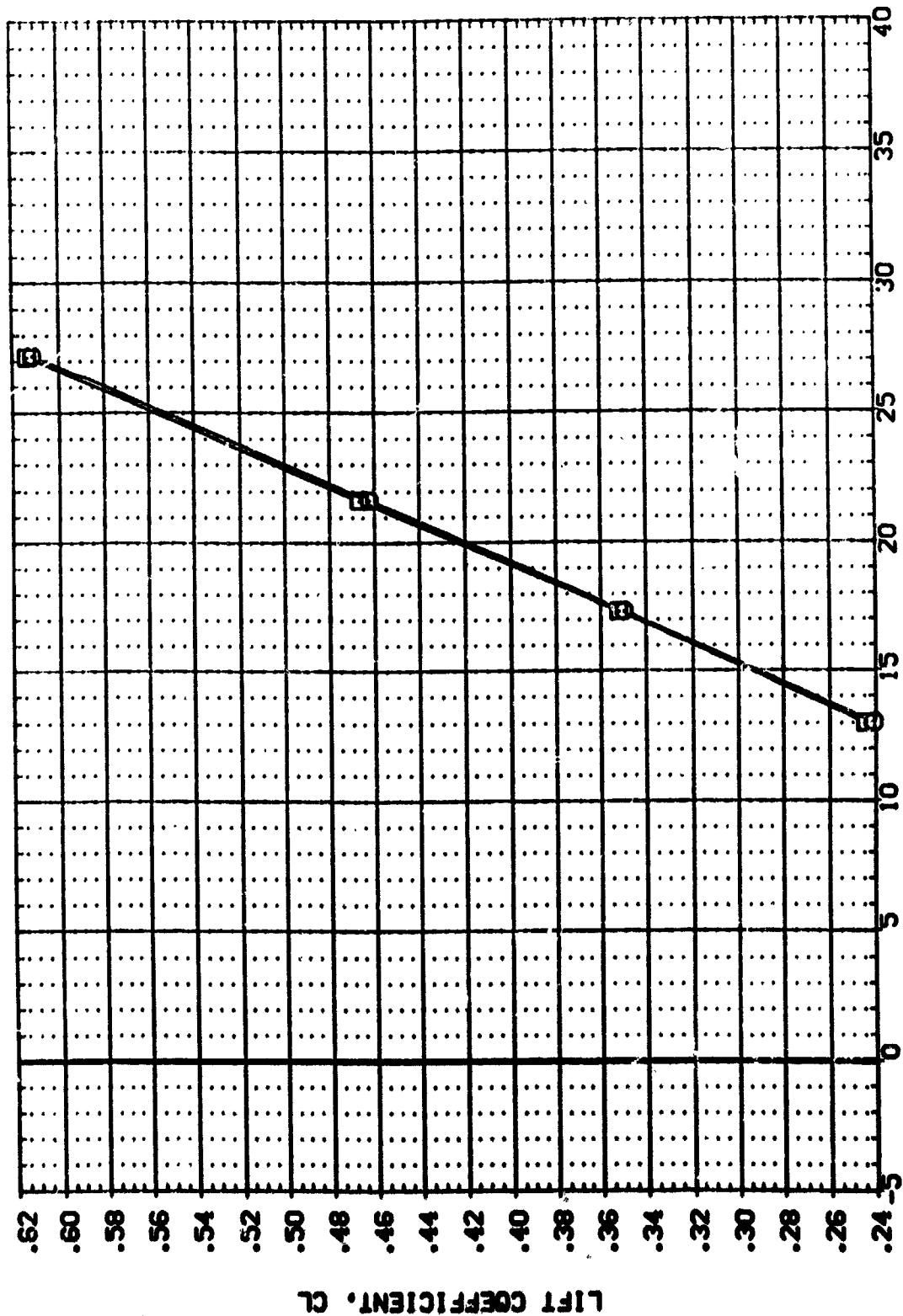
BETA: .000  
PO-JET: .000  
RV/L: 5.000



BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 5 MILLION)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH025)	MA-7-UPVT 1031-ROCKWELL PRR ORB.	.000	.000	5.000	SREF 7245 SQ.FT
(CPH044)	MA-7-UPVT 1031-ROCKWELL PRR ORB.	.000	.000	5.000	LREF 7.8828 INCHES
					BREF 15.1152 INCHES
					XREF 12.9510 INCHES
					YREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE 6.050



ANGLE OF ATTACK, ALPHA, DEGREES

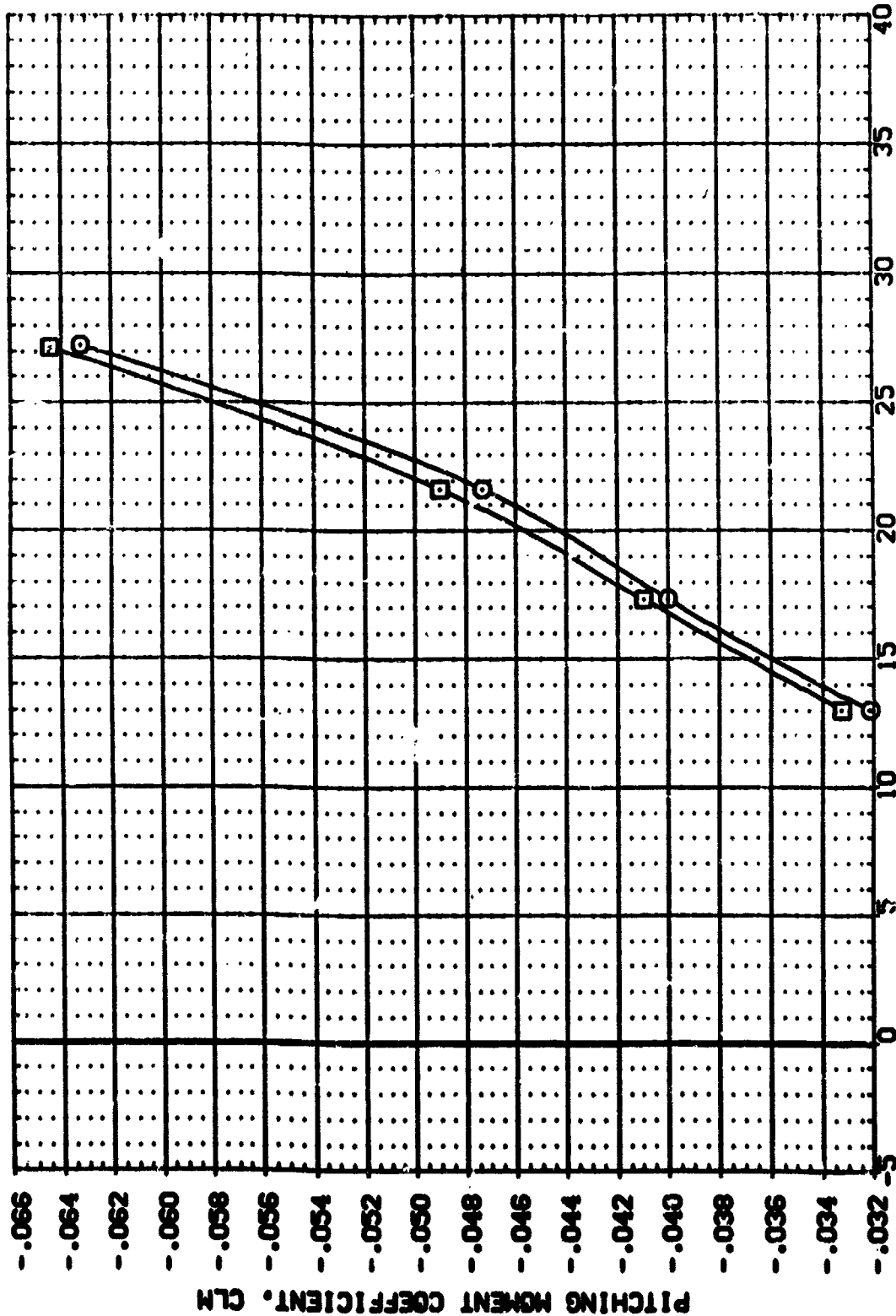
BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 5 MILLION)

(MACH = 4.00)

DATA SET SYMBO. CONFIGURATION DESCRIPTION  
 (C00025) MA-7:UPVT 1031:RECONVELL PRR ORB. CONF: BVTM1  
 (C00044) MA-7:UPVT 1031:RECONVELL PRR ORB. CONF: BVTM4

BETA PO-JET RN/L  
 .000 .000 5.000  
 .000 .000 5.000

REFERENCE INFORMATION  
 SREF 7245 SC.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XREF 12.9510 INCHES  
 YREF .0000 INCHES  
 ZREF 6.0000 INCHES  
 SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

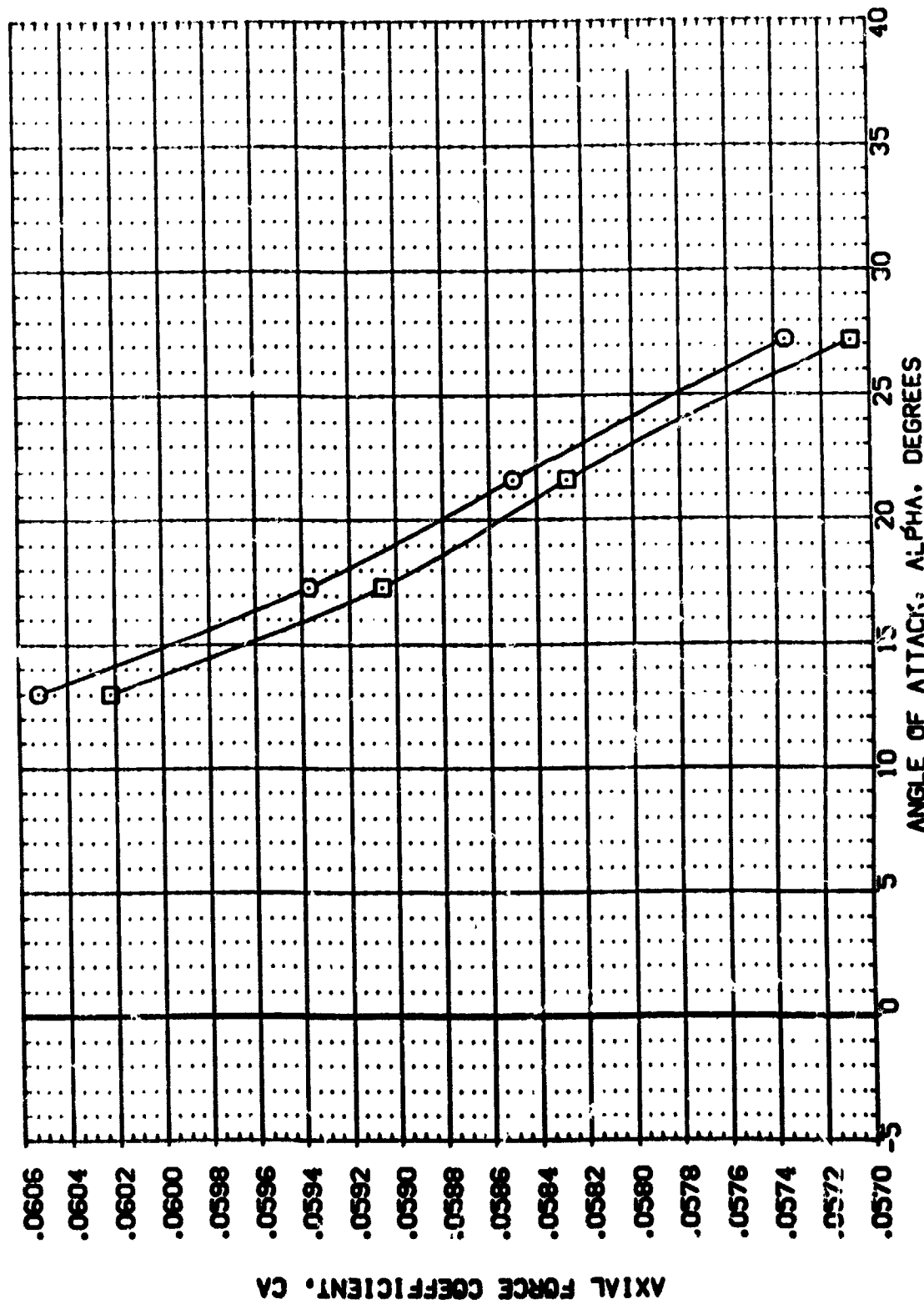
BASIC CONFIGURATION DATA REPEATIBILITY (RN/L= 5 MILLION)

(A)MACH = 4.00

DATA SET SYMBOL: MA-7.1PVT 1031: ROCKWELL PRR DB8. CONF: BVTH1  
 (CPH025) MA-7.1PVT 1031: ROCKWELL PRR DB8. CONF: BVTH4  
 (CPH044)

REFERENCE INFORMATION:  
 SREF: 7245 SQ. FT.  
 LREF: 7.8826 INCHES  
 BREF: 15.1152 INCHES  
 XREF: 12.5513 INCHES  
 YREF: 6.0000 INCHES  
 ZREF: 6.0000 INCHES  
 SCALE: .0150

BETA: .000 PO-JET: .000 QN/L: 5.000



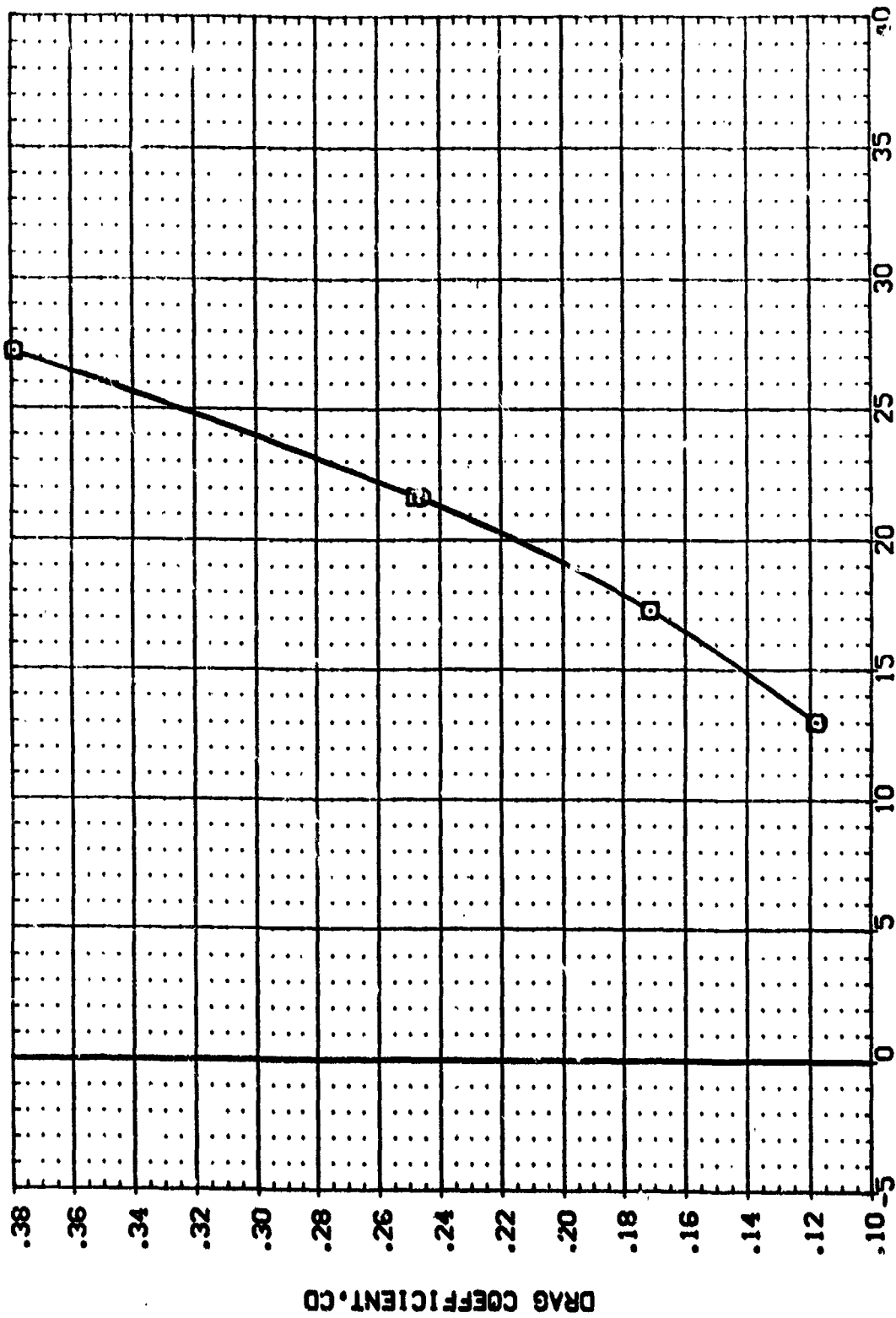
BASIC CONFIGURATION DATA REPEATIBILITY (QN/L = 5 MILLION)

(A)MACH = 4.00

DATA SET SYMBOL: MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN1  
 (CPH025) MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN4  
 (CPH044)

REFERENCE INFORMATION  
 SREF 7245 SQ.FT.  
 LREF 7.882J INCHES  
 BREF 15.1152 INCHES  
 XREF 12.9510 INCHES  
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 ZREF 6.0000 INCHES  
 SCALE .0150

BETA .000 PO-JET RN/L .000 5.000  
 .000 .000 5.000



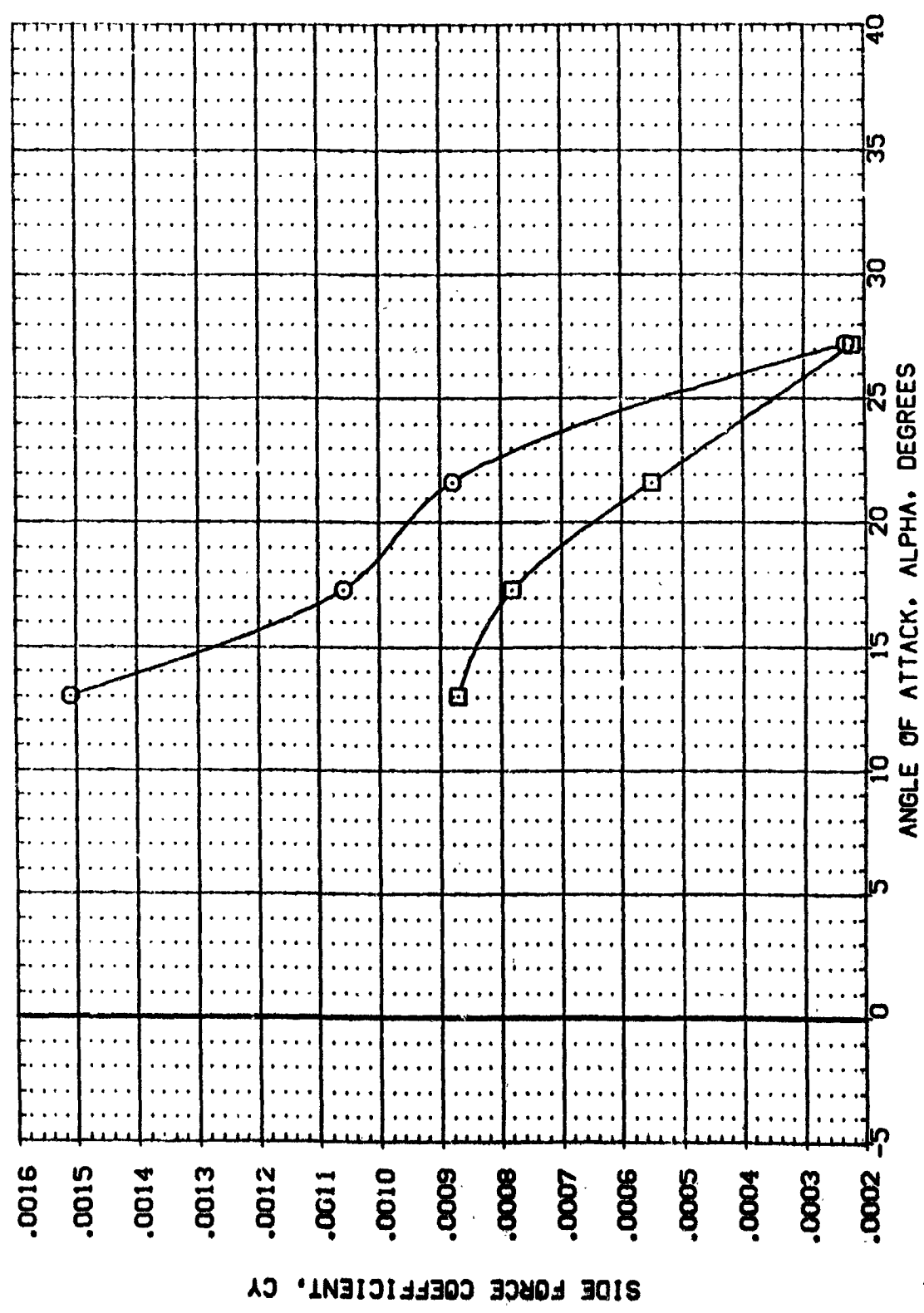
ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATABILITY (RN/L= 5 MILLION)

(M)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RA/L	REFERENCE INFORMATION
(CPH025)	MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF: BVTN1	.000	.000	5.000	SREF .7245 SQ. FT.
(CPH044)	MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF: BVTN4	.000	.000	5.000	LREF 7.8828 INCHES
					BREF 15.1152 INCHES
					XMRP 12.5510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150

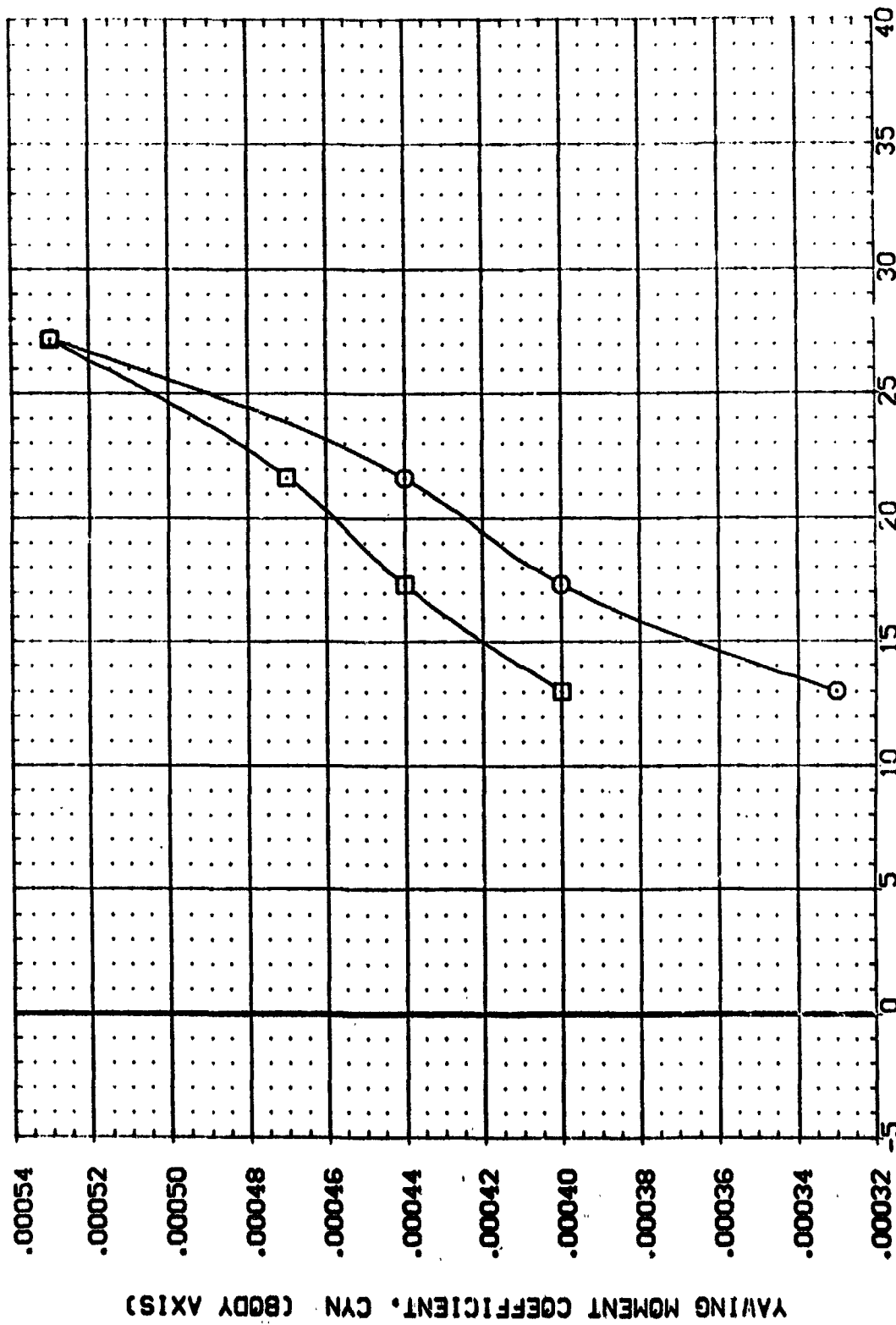


BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 5 MILLION)

(A)MACH = 4.00



DATA SET SYMBO. CONFIGURATION DESCRIPTION BETA PO-JET RN/L REFERENCE INFORMATION  
(CPRO25) MA-7-LPVT 1031-ROCKWELL PRR ORB. CONF. BVTN1 .000 .000 5.000 SREF 7245 SQ.FT.  
(CPRO44) MA-7-LPVT 1031-ROCKWELL PRR ORB. CONF. BVTN4 .000 .000 5.000 LBREF 7.8828 INCHES  
XREF 15.1152 INCHES  
YREF 2.8510 INCHES  
ZREF .0000 INCHES  
SCALE 6.0150 INCHES

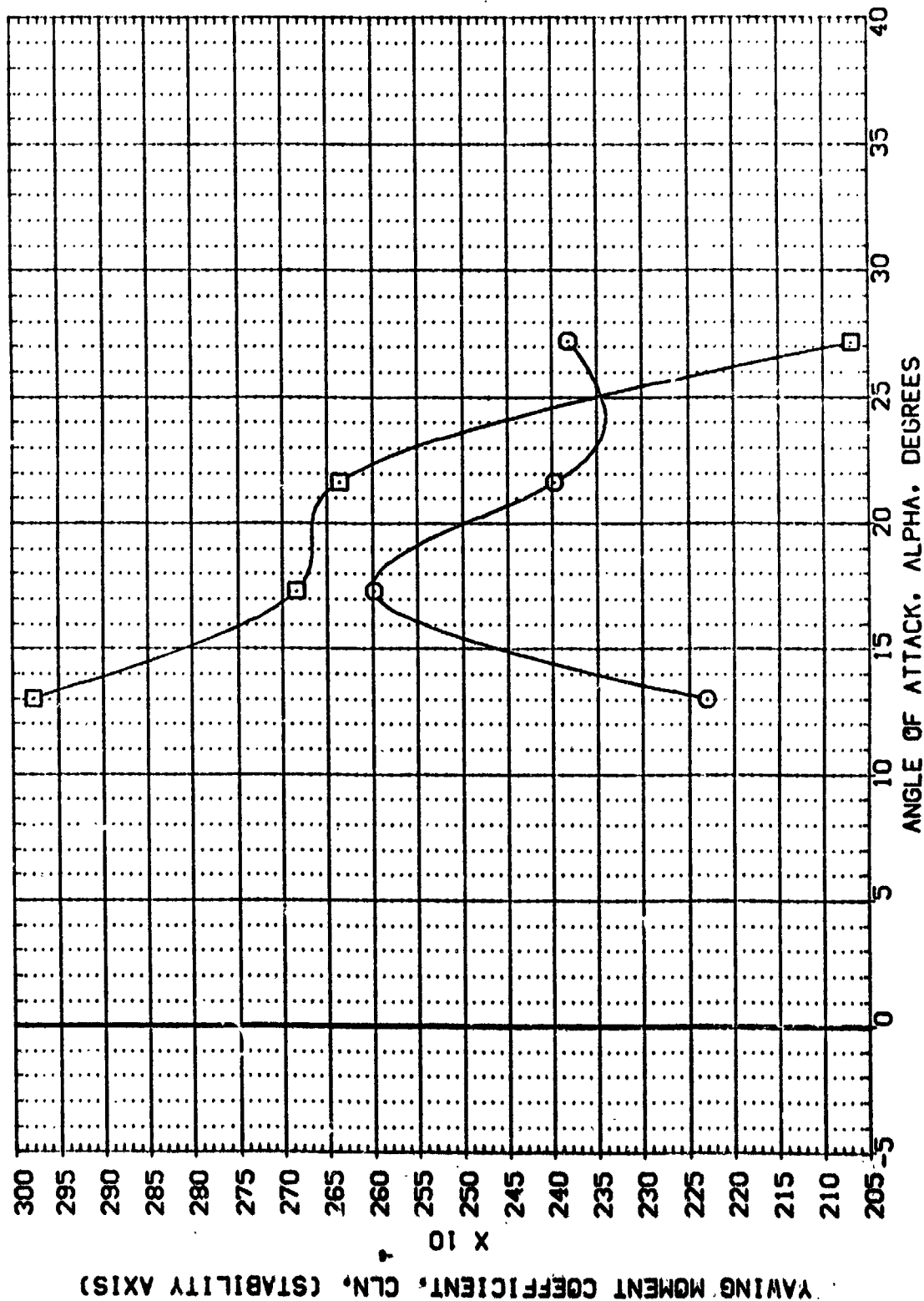


ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 5 MILLION)

(A)MACH = 4.00

REFERENCE INFORMATION	
SREF	7.745
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BREF	15.1152
XREF	12.95.0
YREF	6.0000
ZREF	6.0000
SCALE	1.0150



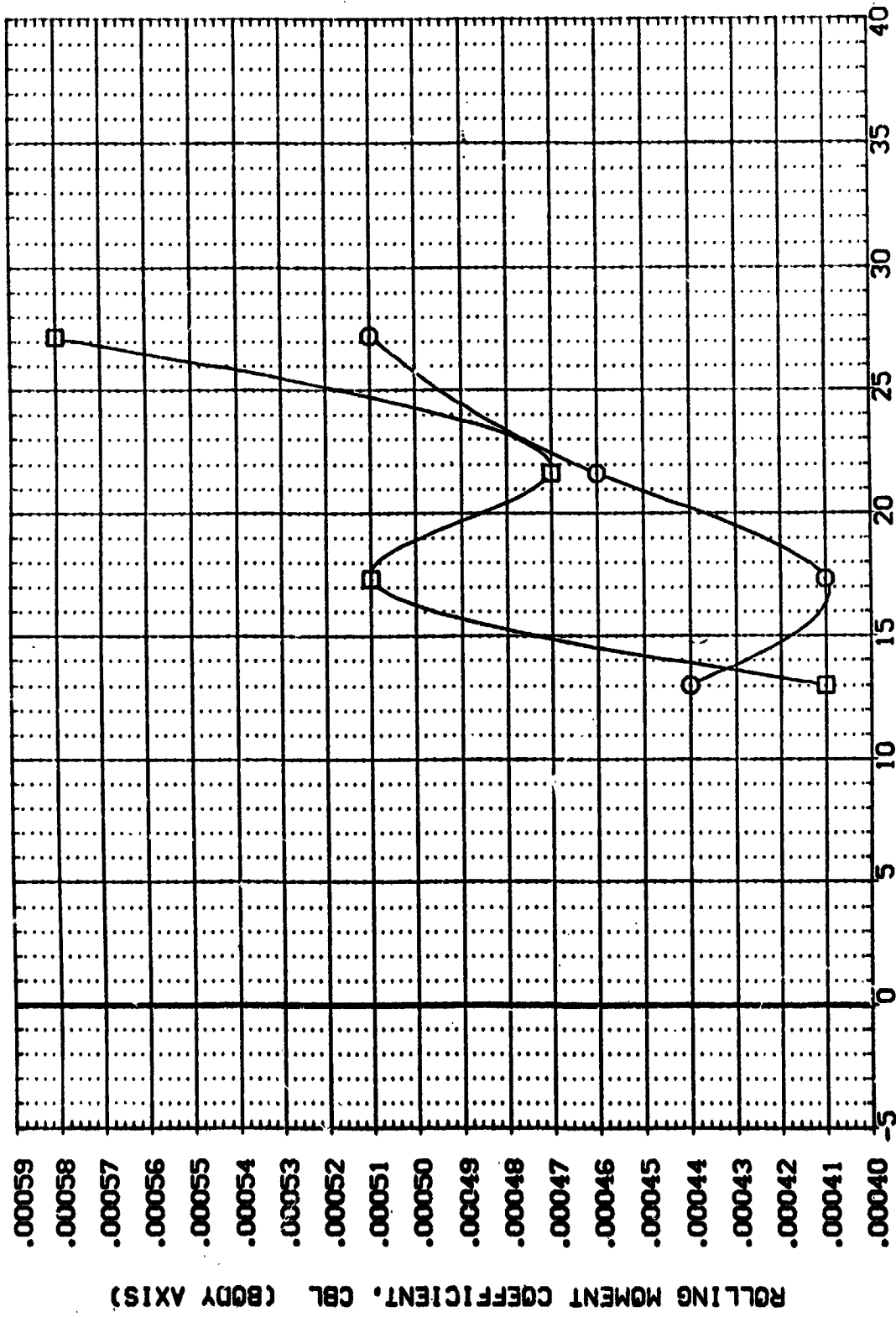
### BASIC CONFIGURATION DATA REPEATABILITY (RN/L = 5 MILLION)

**[A]MACH = 4.00**

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DATA SET SYMBO. CONFIGURATION DESCRIPTION BETA PO-JET RN/L REFERENCE INFORMATION  
(CPH025) MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN1  
(CSD044) MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN4  
SREF .7245 SQ. FT.  
LREF 7.6828 INCHES  
BREF 15.1152 INCHES  
XMRP 12.9510 INCHES  
YMRP .0000 INCHES  
ZMRP 6.0000 INCHES  
SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RN/L = 5 MILLION)

(A)MACH = 4.00

DATA SET SYMBOL: (CPM025) (CPM044)

CONFIGURATION DESCRIPTION: MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF: SVTN4

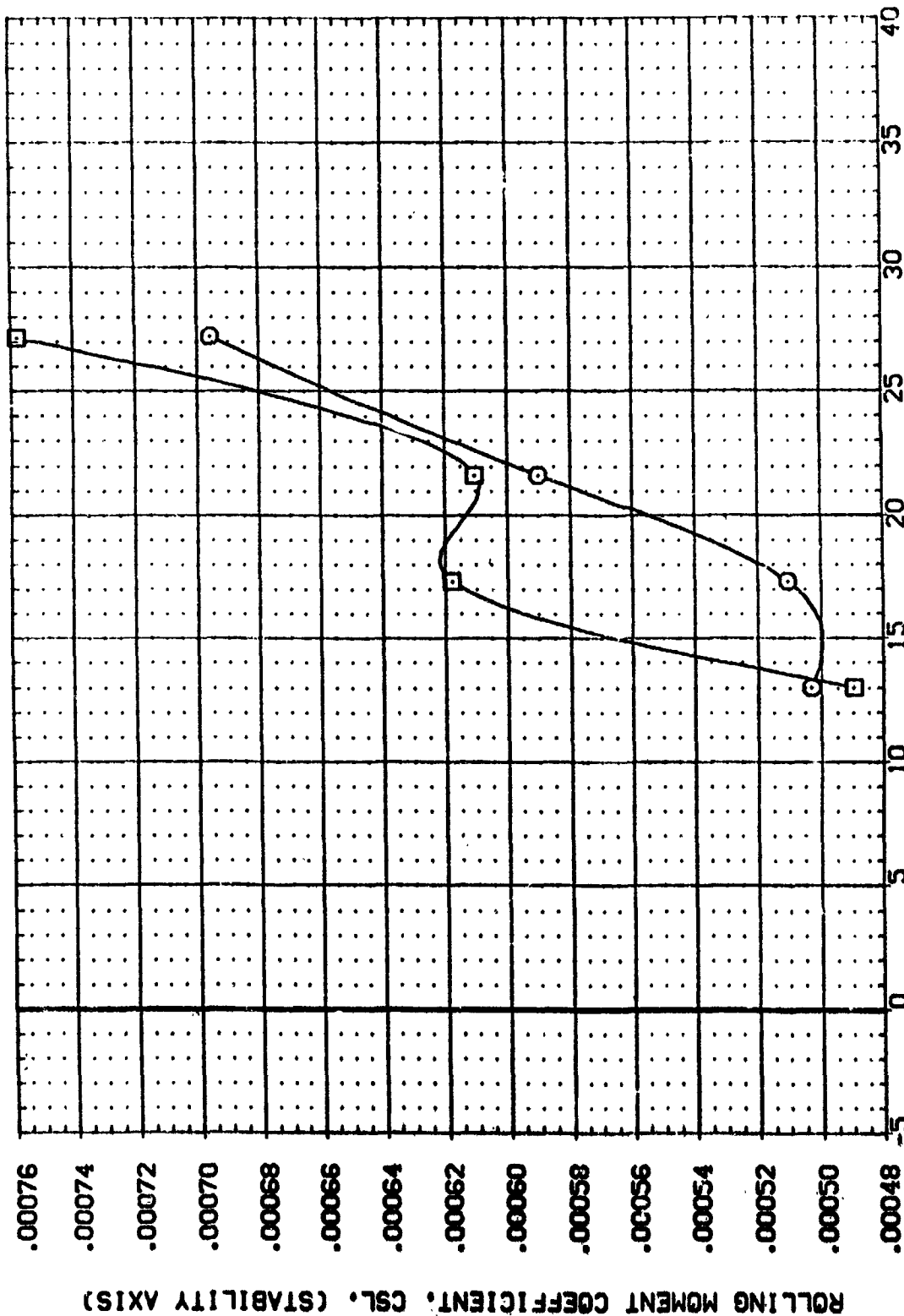
REFERENCE INFORMATION:

REF	SO. FT.	INCHES
SREF	.7245	INCHES
UREF	7.8928	INCHES
UREF	15.1152	INCHES
UREF	12.5510	INCHES
UREF	6.0000	INCHES
UREF	6.0000	INCHES
UREF	.0150	INCHES

BETA: .000

PO-JET: .000

RM/L: 5.000

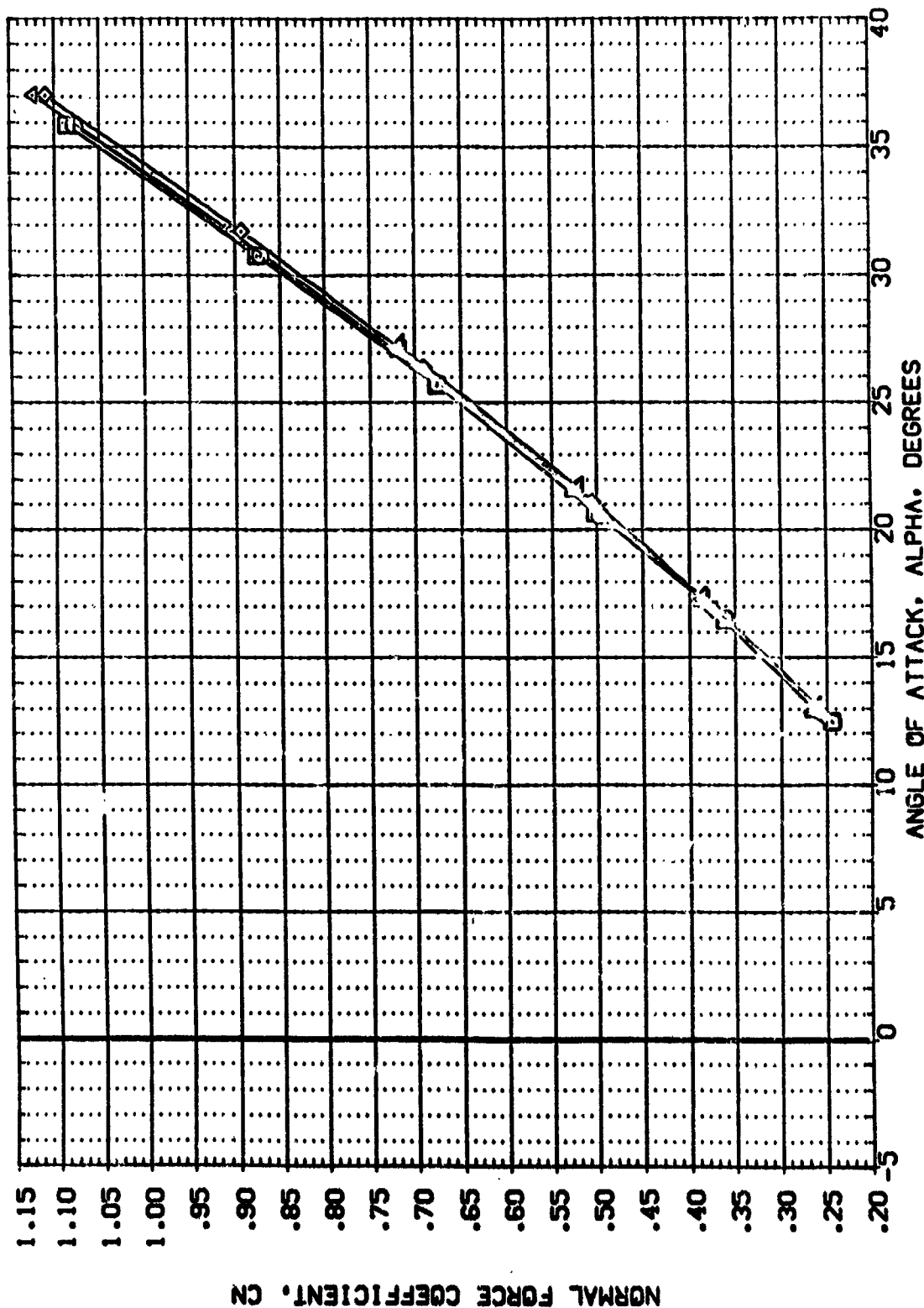


ANGLE OF ATTACK, ALPHA, DEGREES

BASIC CONFIGURATION DATA REPEATIBILITY (RM/L = 5 MILLION)

(A)MACH = 4.00

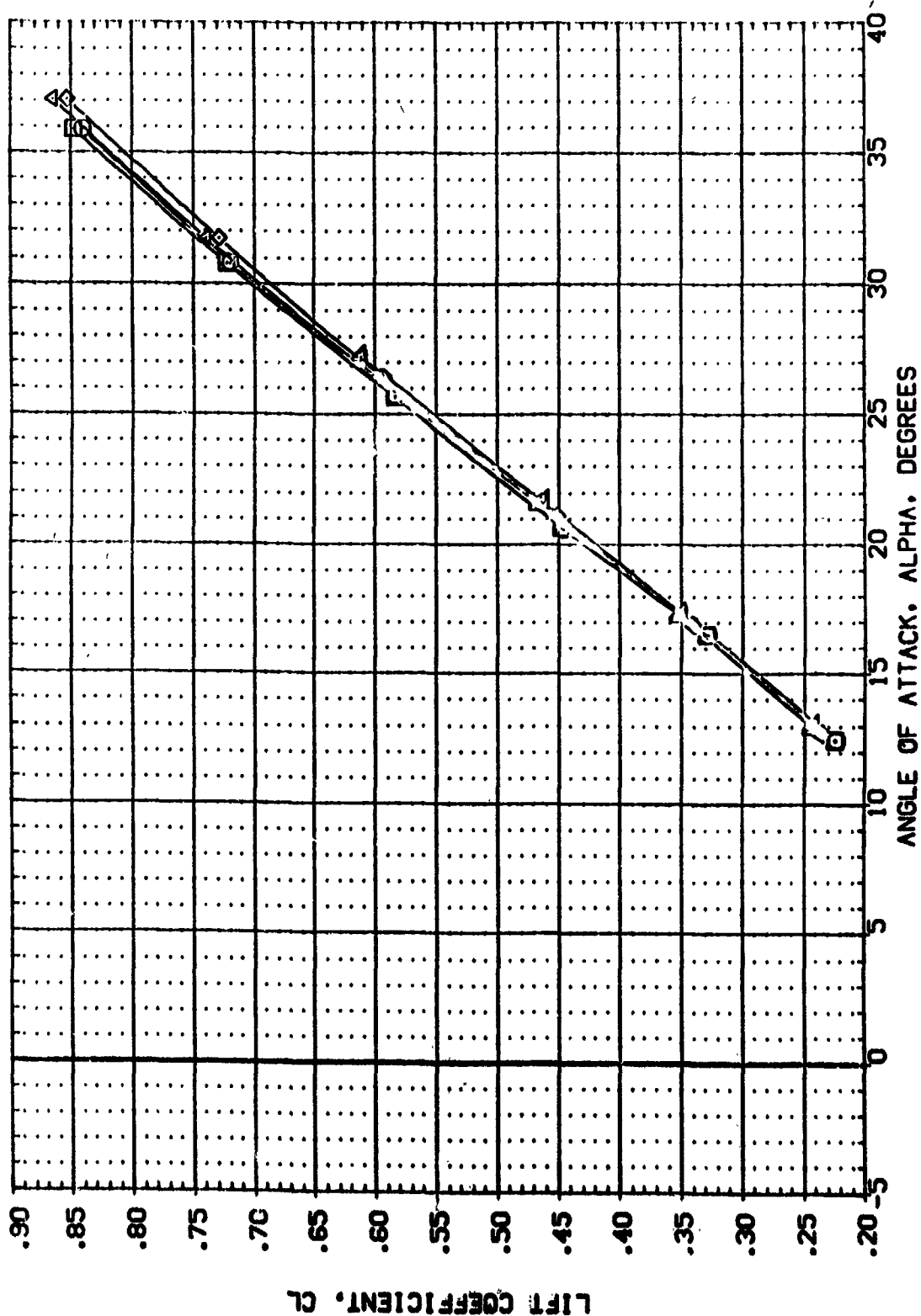
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH021)	MA-7, UPVT 1031, ROCKWELL	.000	.000	1.000	SREF 7245 SQ. FT.
(CPH040)	MA-7, UPVT 1031, ROCKWELL	.000	.000	1.000	LREF 7.8828 INCHES
(CPH024)	MA-7, UPVT 1031, ROCKWELL	.000	.000	3.000	BREF 15.1152 INCHES
(CPH043)	MA-7, UPVT 1031, ROCKWELL	.000	.000	3.000	XCRP 12.9510 INCHES
(CPH025)	MA-7, UPVT 1031, ROCKWELL	.000	.000	5.000	YCRP .0000 INCHES
(CPH044)	MA-7, UPVT 1031, ROCKWELL	.000	.000	5.000	ZCRP .0150 INCHES



EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH021)	MA-7-LPVT 1031-ROCKWELL PRR CRB. CONF.	.000	.000	1.000	SKREF .7245 SC.FT.
(CPH040)	MA-7-LPVT 1031-ROCKWELL PRR CRB. CONF.	.000	.000	1.000	LREF 7.8828 INCHES
(CPH024)	MA-7-LPVT 1031-ROCKWELL PRR CRB. CONF.	.000	.000	3.000	EREF 15.1152 INCHES
(CPH043)	MA-7-LPVT 1031-ROCKWELL PRR CRB. CONF.	.000	.000	3.000	XPRP 12.9510 INCHES
(CPH025)	MA-7-LPVT 1031-ROCKWELL PRR CRB. CONF.	.000	.000	5.000	YPRP 6.0000 INCHES
(CPH044)	MA-7-LPVT 1031-ROCKWELL PRR CRB. CONF.	.000	.000	5.000	ZPRP 6.0000 INCHES
					SCALE .0150

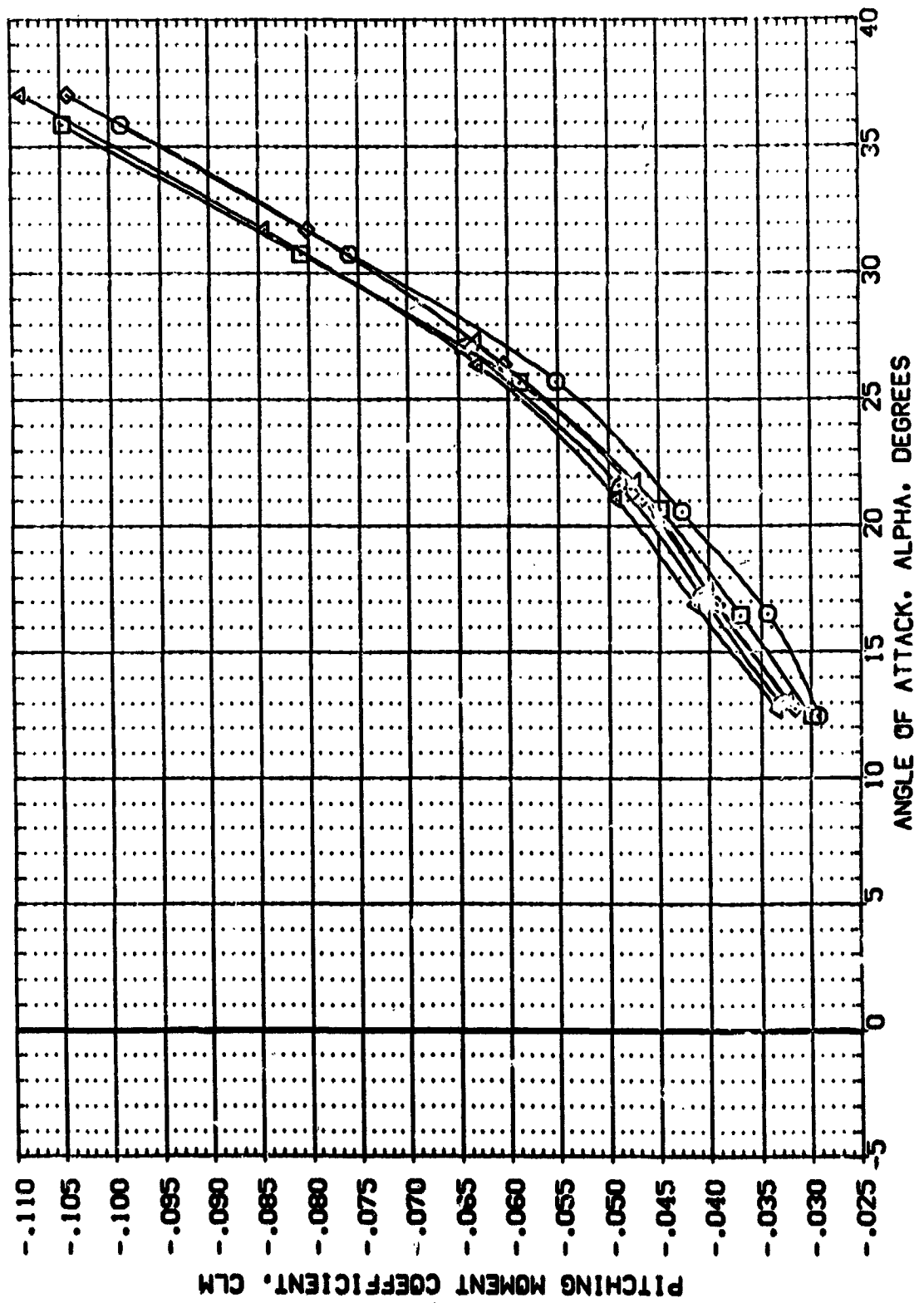


EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH021)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN1	.000	.000	1.000	SREF 7.245 SQ.FT.
(CPH040)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN4	.000	.000	1.000	LREF 7.8628 INCHES
(CPH041)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN1	.000	.000	3.000	ESREF 15.1152 INCHES
(CPH042)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN4	.000	.000	3.000	X-REF 12.9510 INCHES
(CPH043)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN1	.000	.000	5.000	W-REF 6.0000 INCHES
(CPH044)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTN4	.000	.000	5.000	Z-REF 6.0150 INCHES
					SCALE

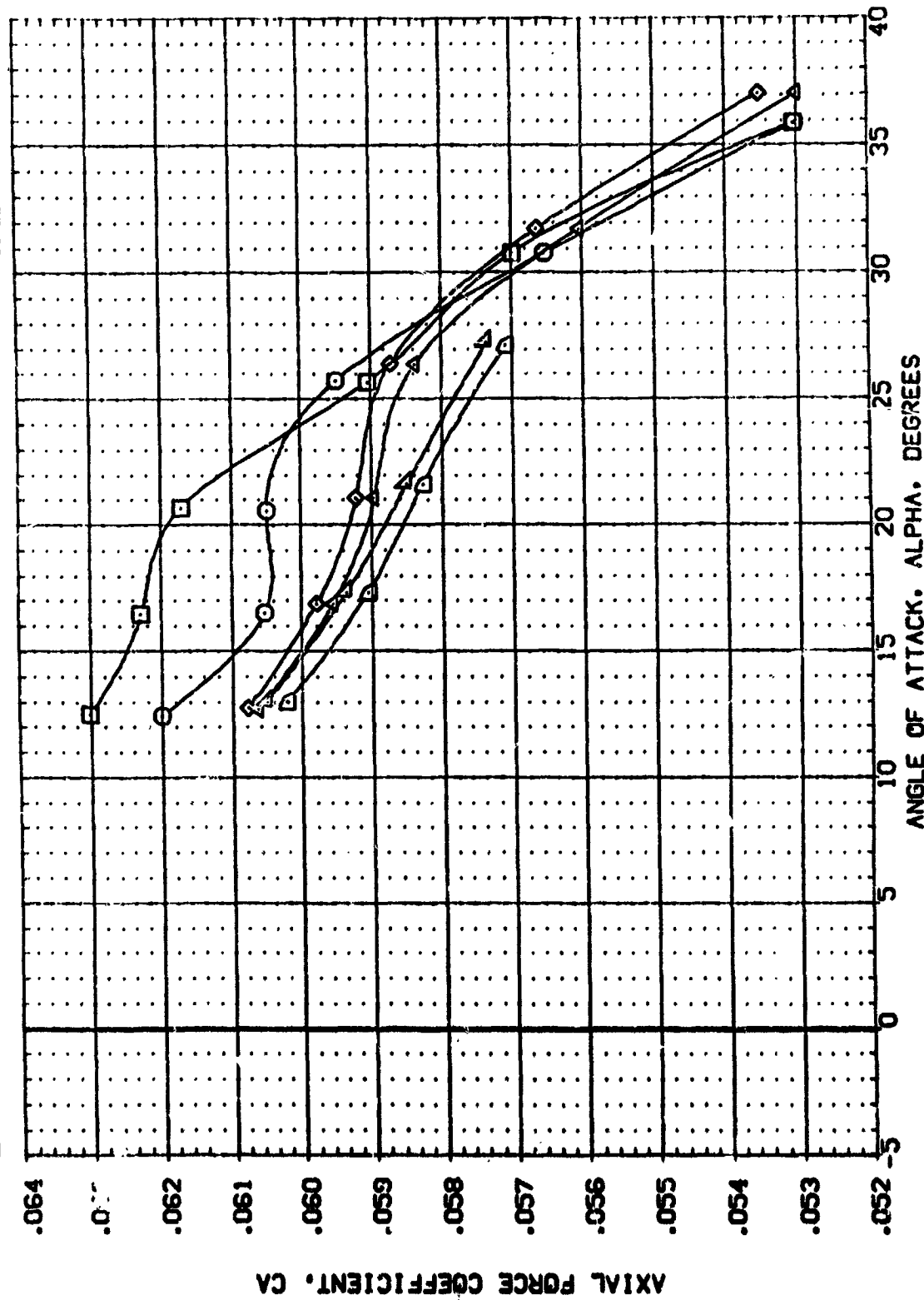


EFFECT OF REYNOLDS NUMBER

(A)KACH = 4.00



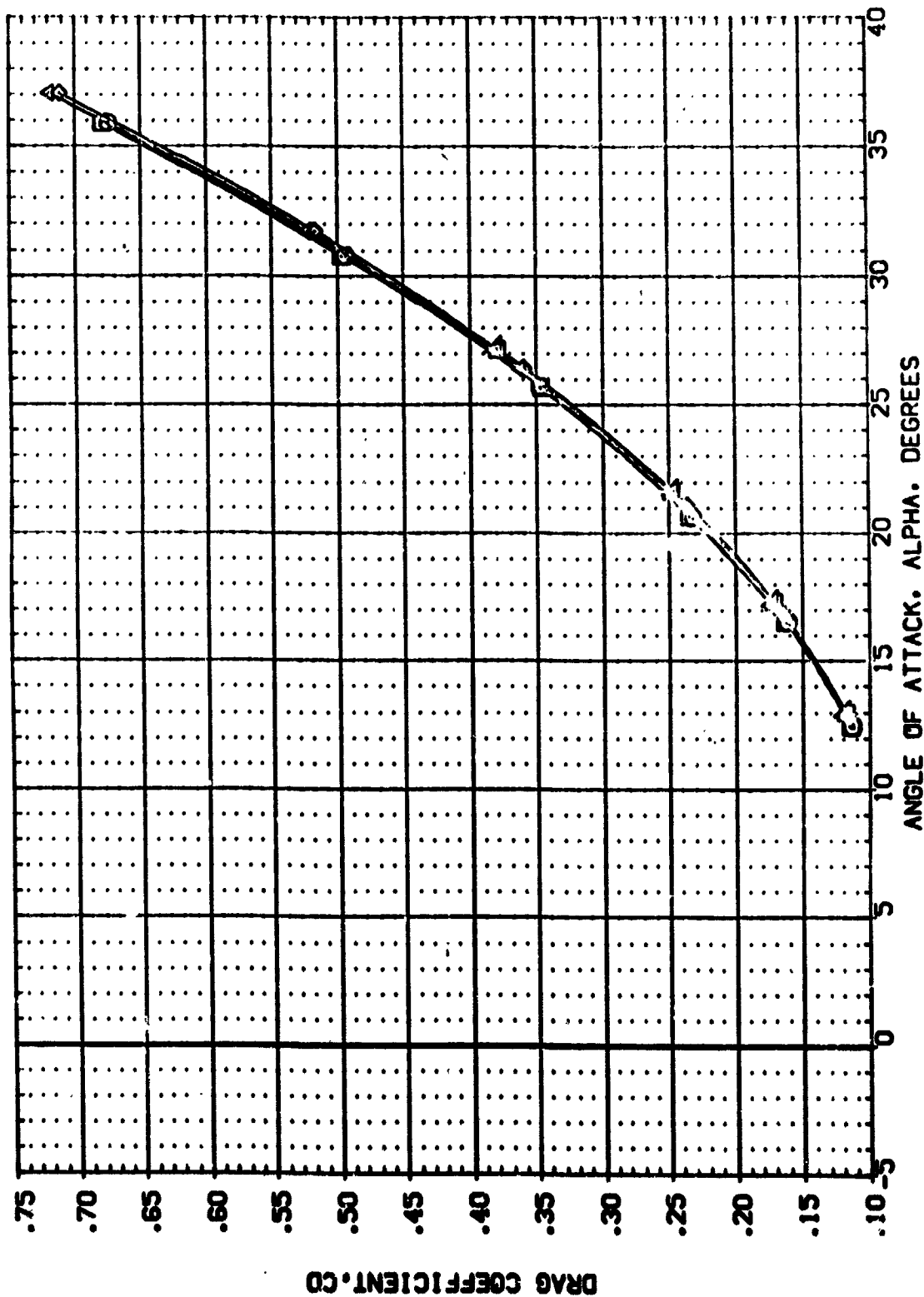
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(OP021)	MA-7, UPVT 1031, ROCKWELL PRR C88, CONF.	.000	.000	1.000	SREF 7245 SQ. FT.
(OP040)	MA-7, UPVT 1031, ROCKWELL PRR C88, CONF.	.000	.000	1.000	LREF 7.8828 INCHES
(OP041)	MA-7, UPVT 1031, ROCKWELL PRR C88, CONF.	.000	.000	3.000	BREF 15.1152 INCHES
(OP042)	MA-7, UPVT 1031, ROCKWELL PRR C88, CONF.	.000	.000	3.000	XTRP 12.9510 INCHES
(OP043)	MA-7, UPVT 1031, ROCKWELL PRR C88, CONF.	.000	.000	5.000	ZTRP 6.0000 INCHES
(OP044)	MA-7, UPVT 1031, ROCKWELL PRR C88, CONF.	.000	.000	5.000	SCALE .0150



EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00

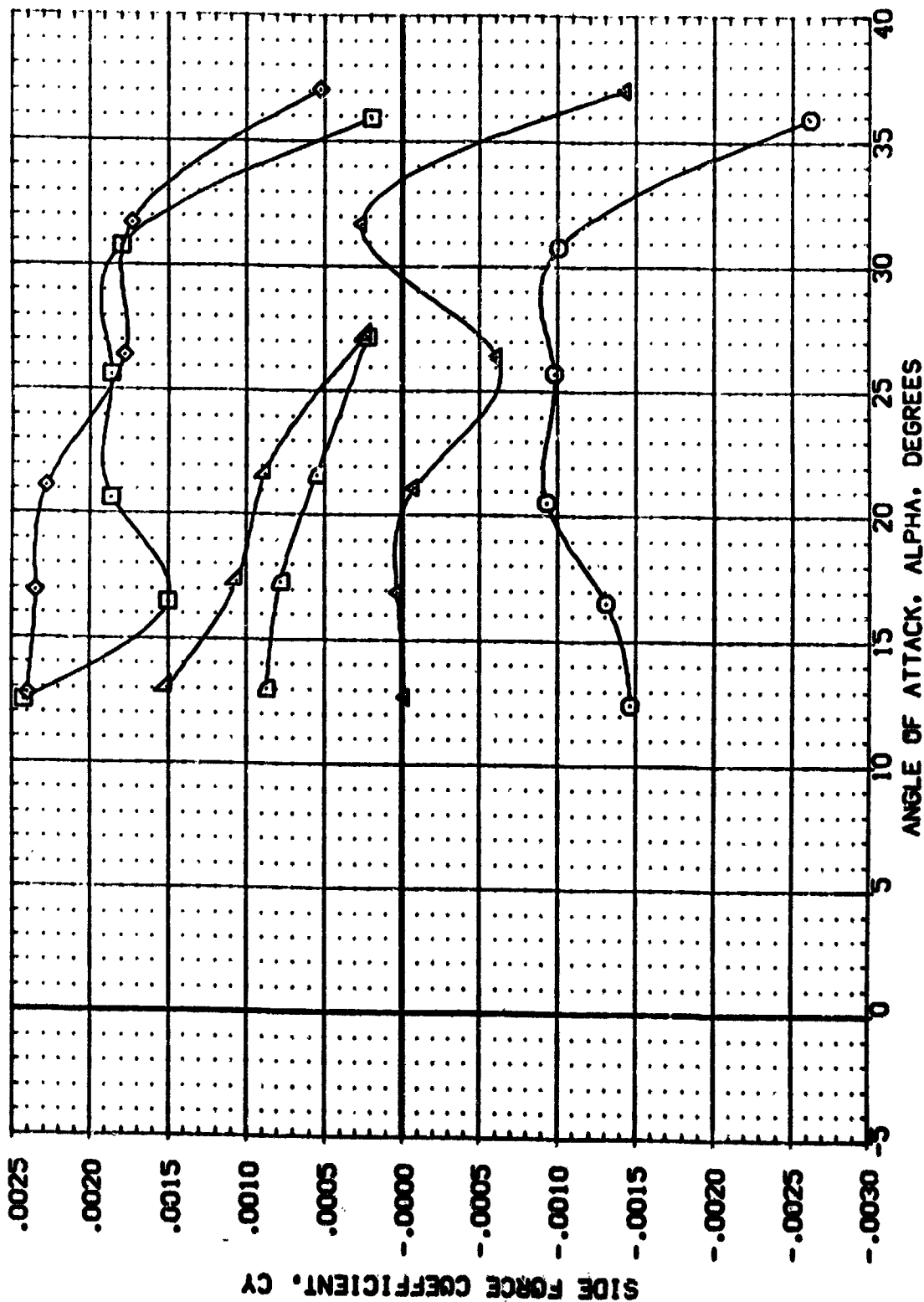
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVL	REFERENCE INFORMATION
(CPND21)	MA-7-LPVT 1031:RODVELL PRR ORB. CONF.	.000	.000	1.000	SREF .7245 SQ.FT.
(CPND40)	MA-7-LPVT 1031:RODVELL PRR ORB. CONF.	.000	.000	1.000	LREF 7.8828 INCHES
(CPND41)	MA-7-LPVT 1031:RODVELL PRR ORB. CONF.	.000	.000	3.000	BREF 15.1152 INCHES
(CPND42)	MA-7-LPVT 1031:RODVELL PRR ORB. CONF.	.000	.000	5.000	XREF 12.9510 INCHES
(CPND43)	MA-7-LPVT 1031:RODVELL PRR ORB. CONF.	.000	.000	5.000	YREF 6.0000 INCHES
(CPND44)	MA-7-LPVT 1031:RODVELL PRR ORB. CONF.	.000	.000	5.000	ZREF 6.0153 INCHES
					SCALE



EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CP021)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONE	.000	.000	1.000	SREF 7245 SO.FT.
(CP040)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONE	.000	.000	1.000	LREF 7.8828 INCHES
(CP041)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONE	.000	.000	3.000	BREF 15.1152 INCHES
(CP042)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONE	.000	.000	3.000	XVREF 12.9510 INCHES
(CP043)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONE	.000	.000	5.000	YVREF 6.0000 INCHES
(CP044)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONE	.000	.000	5.000	ZVREF 6.0000 INCHES
					SCALE .0150

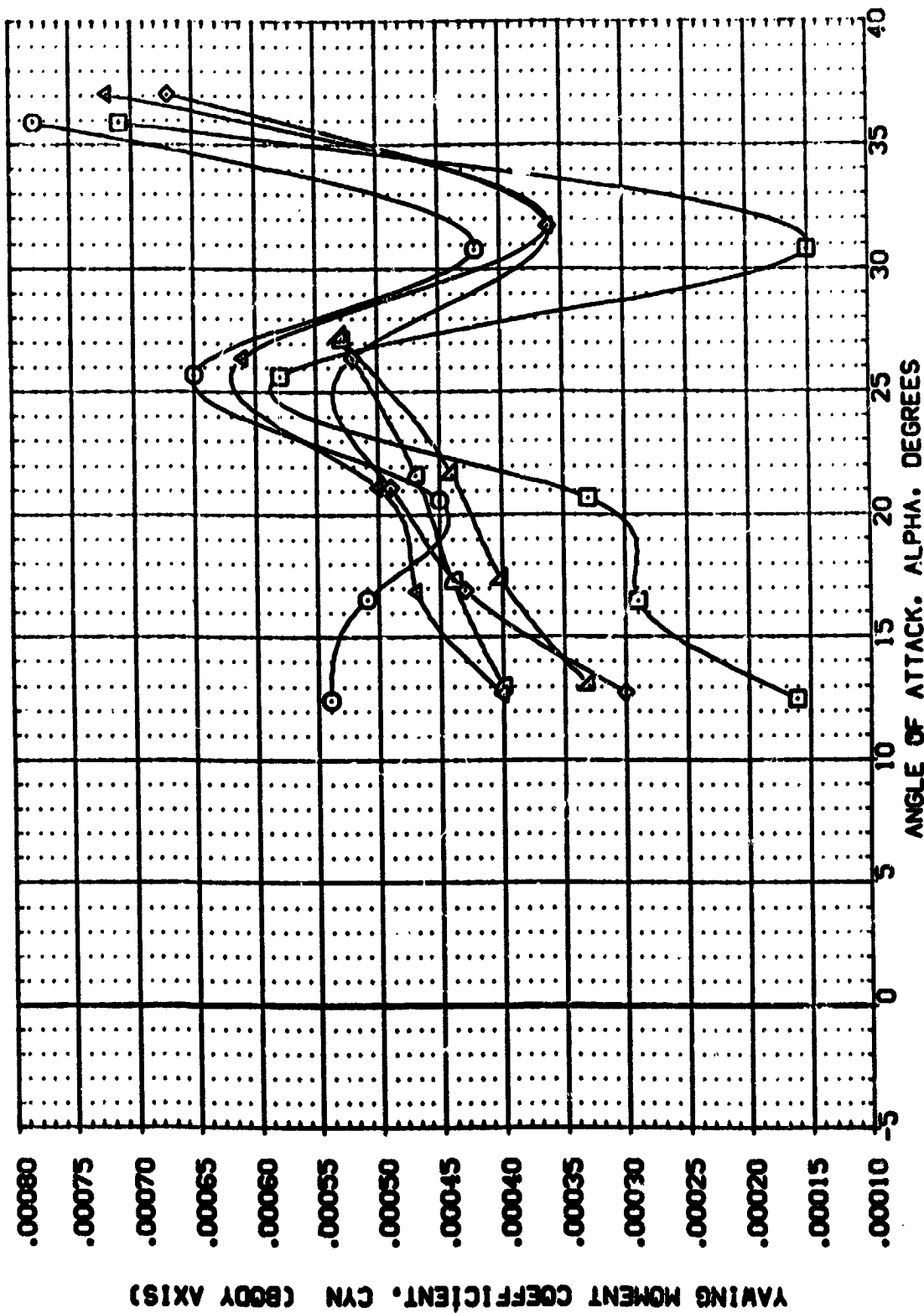


EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CONF.	SVTNI	BETA	PO-JET	RM/L	REFERENCE INFORMATION
(CPH021)	MA-7.1PVT 1031.ROCKWELL PRR ORB.	CONF.	SVTNI	.000	.000	1.000	SREF 7245 50.FT
(CPH040)	MA-7.1PVT 1031.ROCKWELL PRR ORB.	CONF.	SVTNI	.000	.000	1.000	LREF 7.6825 50.FT
(CPH041)	MA-7.1PVT 1031.ROCKWELL PRR ORB.	CONF.	SVTNI	.000	.000	3.000	BREF 15.1125 50.FT
(CPH042)	MA-7.1PVT 1031.ROCKWELL PRR ORB.	CONF.	SVTNI	.000	.000	5.000	XREF 12.5000 50.FT
(CPH043)	MA-7.1PVT 1031.ROCKWELL PRR ORB.	CONF.	SVTNI	.000	.000	5.000	YREF 6.0000 50.FT
(CPH044)	MA-7.1PVT 1031.ROCKWELL PRR ORB.	CONF.	SVTNI	.000	.000	5.000	ZREF 6.0000 50.FT
							SCALE 6.0125

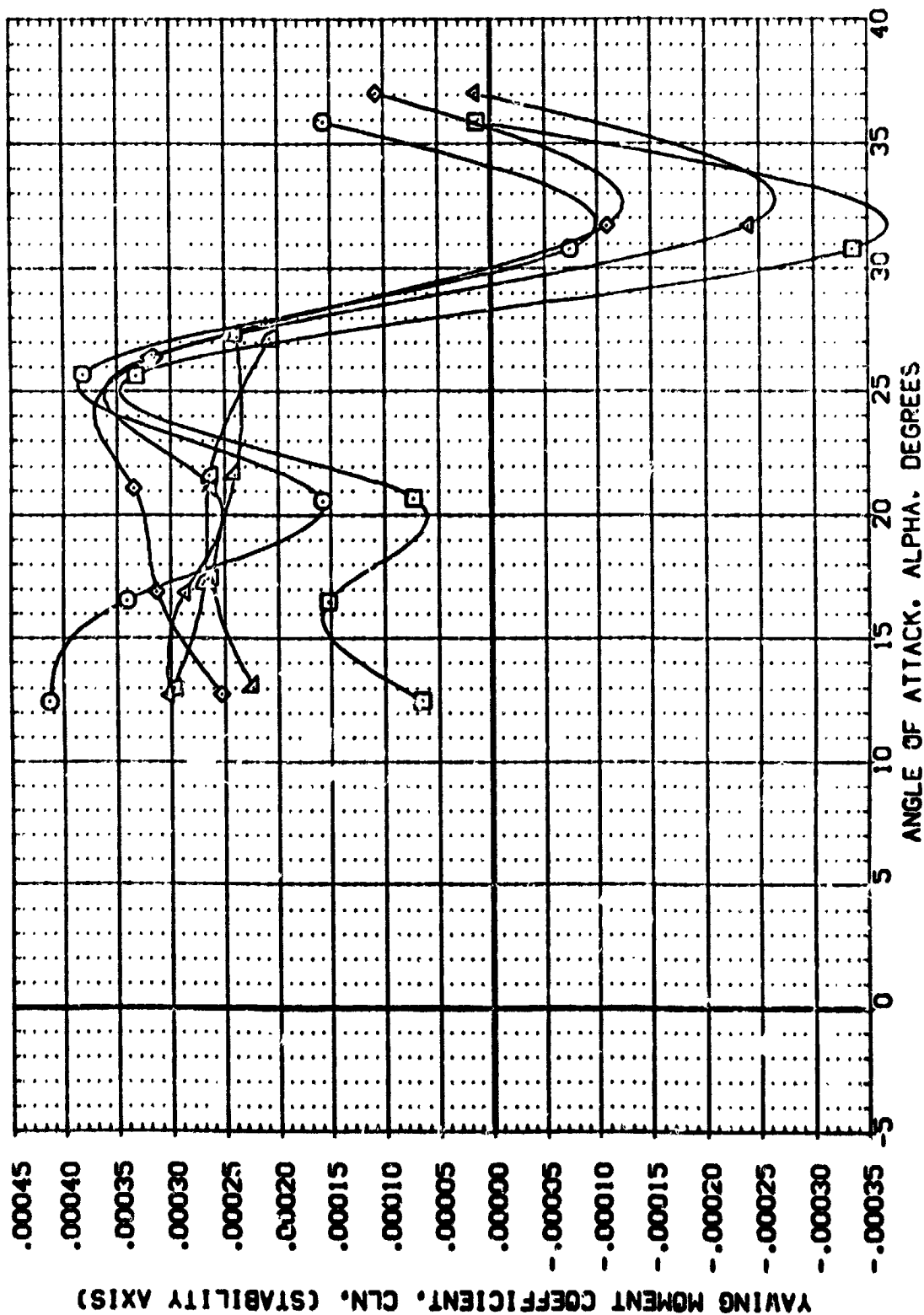


EFFECT OF REYNOLDS NUMBER

(A) MACH = 4.00

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    BETA    PO-JET    RN/L    REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPK21)	MA-7, UPVT 1031, ROCKWELL PRP C28	.000	.000	1.000	SREF 7245 SO. FT.
(CPK22)	MA-7, UPVT 1031, ROCKWELL PRP C28	.000	.000	1.000	LREF 7.6628 INCHES
(CPK23)	MA-7, UPVT 1031, ROCKWELL PRP C28	.000	.000	3.000	SREF 15.1152 INCHES
(CPK24)	MA-7, UPVT 1031, ROCKWELL PRP C28	.000	.000	3.000	XREF 12.9510 INCHES
(CPK25)	MA-7, UPVT 1031, ROCKWELL PRP C28	.000	.000	5.000	YREF .0000 INCHES
(CPK26)	MA-7, UPVT 1031, ROCKWELL PRP C28	.000	.000	5.000	ZREF .0000 INCHES
(CPK27)	MA-7, UPVT 1031, ROCKWELL PRP C28	.000	.000	5.000	SCALE .0150

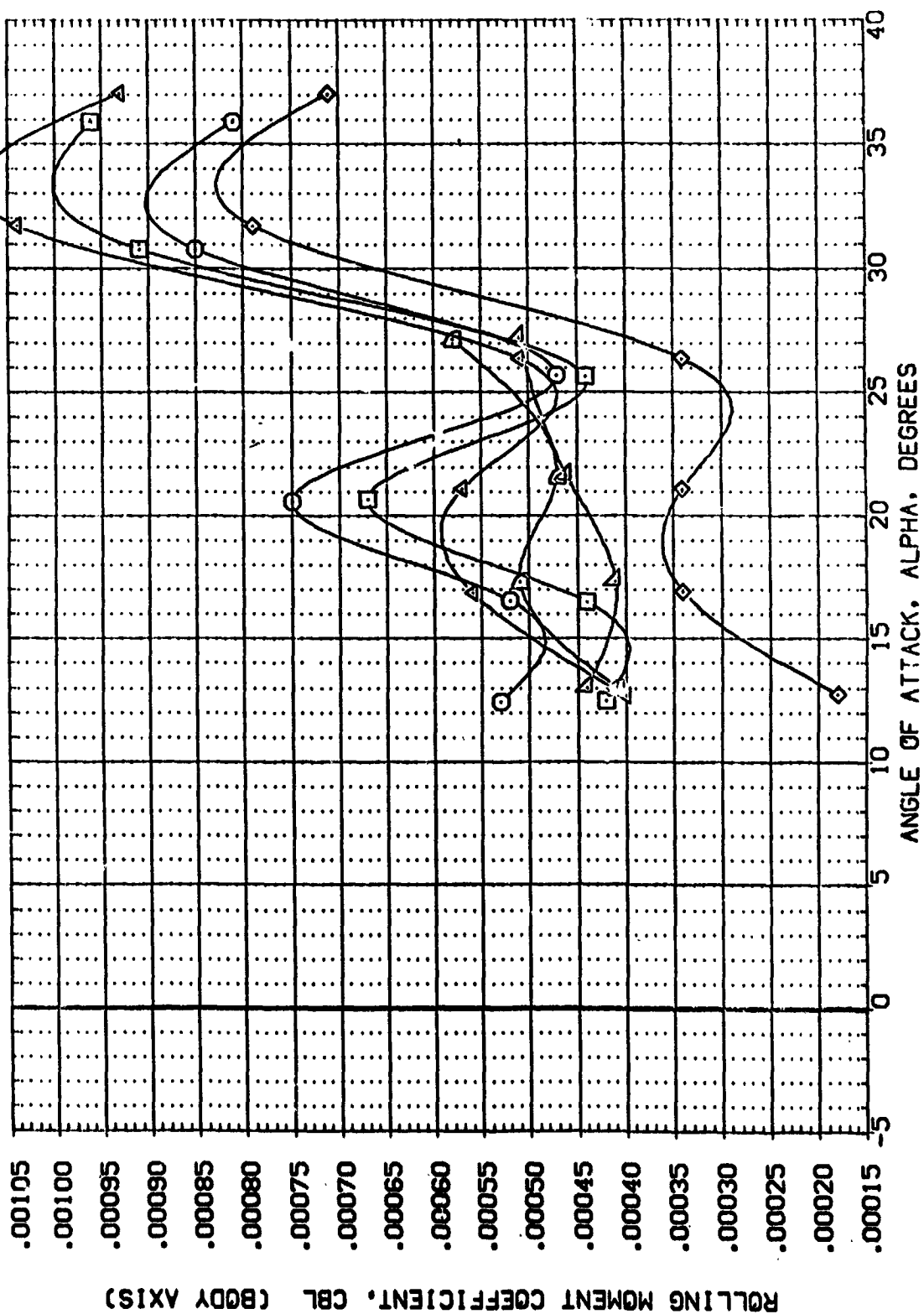


EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION

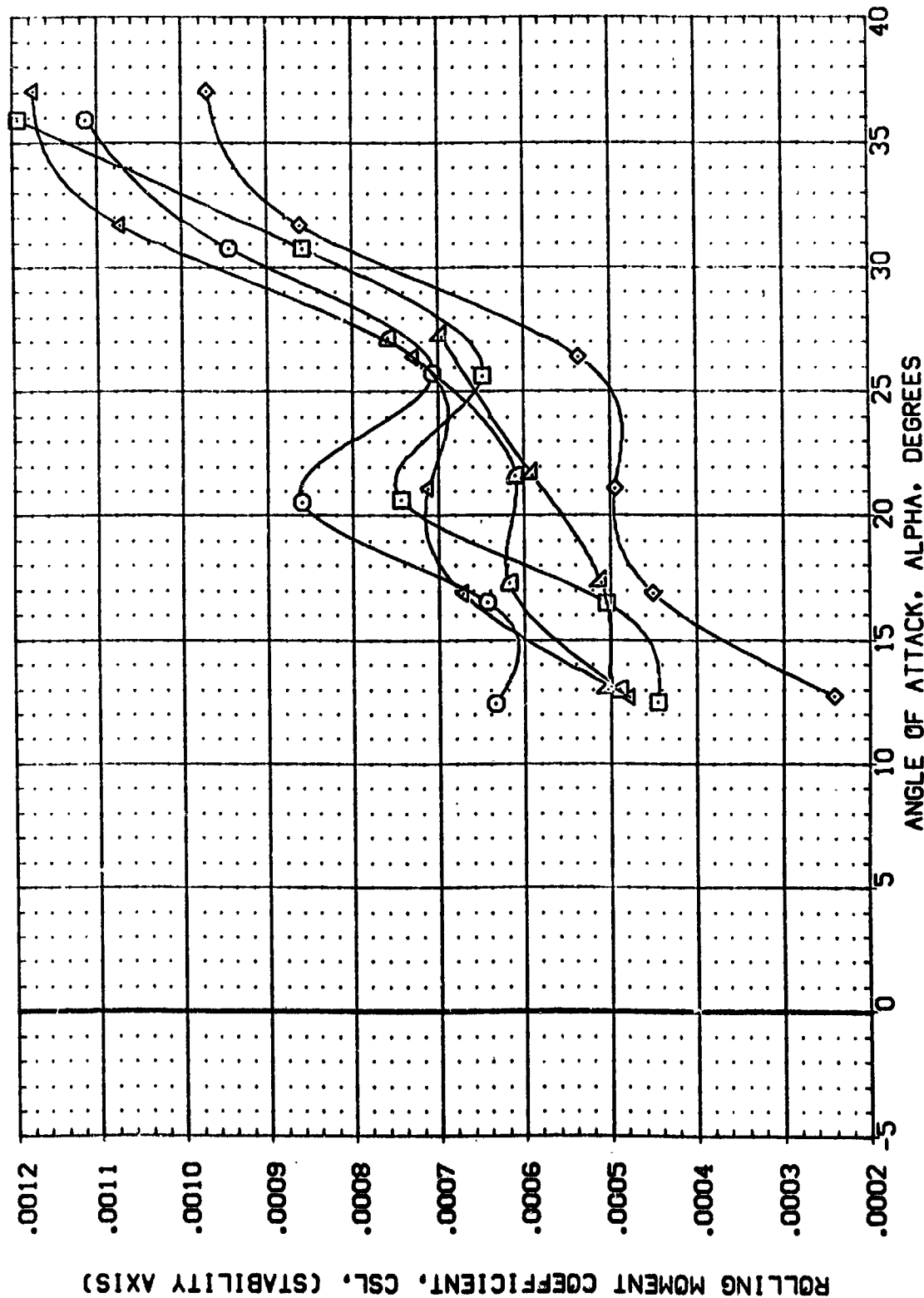
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	OR8	CONF	BVTN1	BETA	PG-JET	RN/L	REFERENCE INFORMATION
(CPH021)	MA-7-LPVT 1031-ROCKWELL PRR	OR8	CONF	BVTN1	.000	.000	1.000	SREF 7245 SQ.FT.
(CPH040)	MA-7-LPVT 1031-ROCKWELL PRR	OR8	CONF	BVTN1	.000	.000	1.000	LREF 7.8828 INCHES
(CPH024)	MA-7-LPVT 1031-ROCKWELL PRR	OR8	CONF	BVTN1	.000	.000	3.000	BREF 15.1152 INCHES
(CPH043)	MA-7-LPVT 1031-ROCKWELL PRR	OR8	CONF	BVTN1	.000	.000	5.000	XMRP 12.9510 INCHES
(CPH025)	MA-7-LPVT 1031-ROCKWELL PRR	OR8	CONF	BVTN1	.000	.000	5.000	YMRP 6.0000 INCHES
(CPH044)	MA-7-LPVT 1031-ROCKWELL PRR	OR8	CONF	BVTN1	.000	.000	5.000	ZMRP 6.0000 INCHES
								SCALE 6.0000 INCHES



EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00

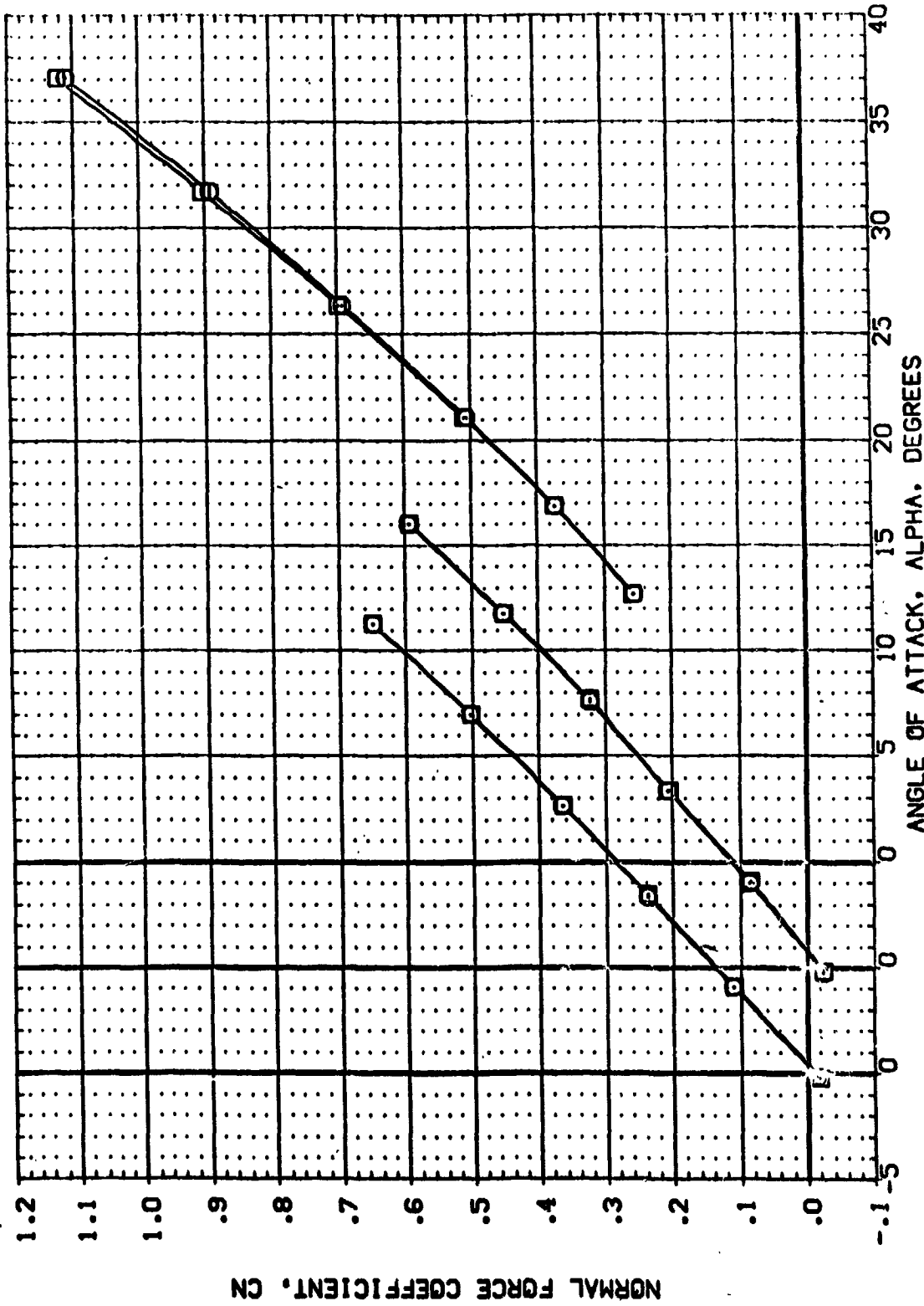
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CP021)	MA-7, UPVT 1031, ROCKVELL PRR 098, CCF	.000	.000	1.000	SREF 7245 SQ.FT.
(CP040)	MA-7, UPVT 1031, ROCKVELL PRR 098, CCF	.000	.000	1.000	LREF 7.8828 INCHES
(CP042)	MA-7, UPVT 1031, ROCKVELL PRR 098, CCF	.000	.000	3.000	BREF 15.1152 INCHES
(CP043)	MA-7, UPVT 1031, ROCKVELL PRR 098, CCF	.000	.000	3.000	XREF 12.9510 INCHES
(CP025)	MA-7, UPVT 1031, ROCKVELL PRR 098, CCF	.000	.000	5.000	YREF 6.0000 INCHES
(CP044)	MA-7, UPVT 1031, ROCKVELL PRR 098, CCF	.000	.000	5.000	ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF REYNOLDS NUMBER

(MACH = 4.00)

DATA SET SYMBOL	CONF. IGRATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(BPH016)	MA-7, UPVT 1031, ROCKWELL PRR 098, CONF.	.000	.000	3.000	SREF 7245 SC.FT.
(BPH036)	MA-7, UPVT 1031, ROCKWELL PRR 098, CONF.	.000	.000	3.000	LREF 7.8828 INCHES
					BREF 15.1152 INCHES
					YMRP 12.5510 INCHES
					ZMRP 6.0000 INCHES
					SCALE 0.150



EFFECT OF MACH NO. ON BASIC CONFIGURATION

(A) MACH = 2.50 (B) 2.95 (C) 4.00



REFERENCE INFORMATION

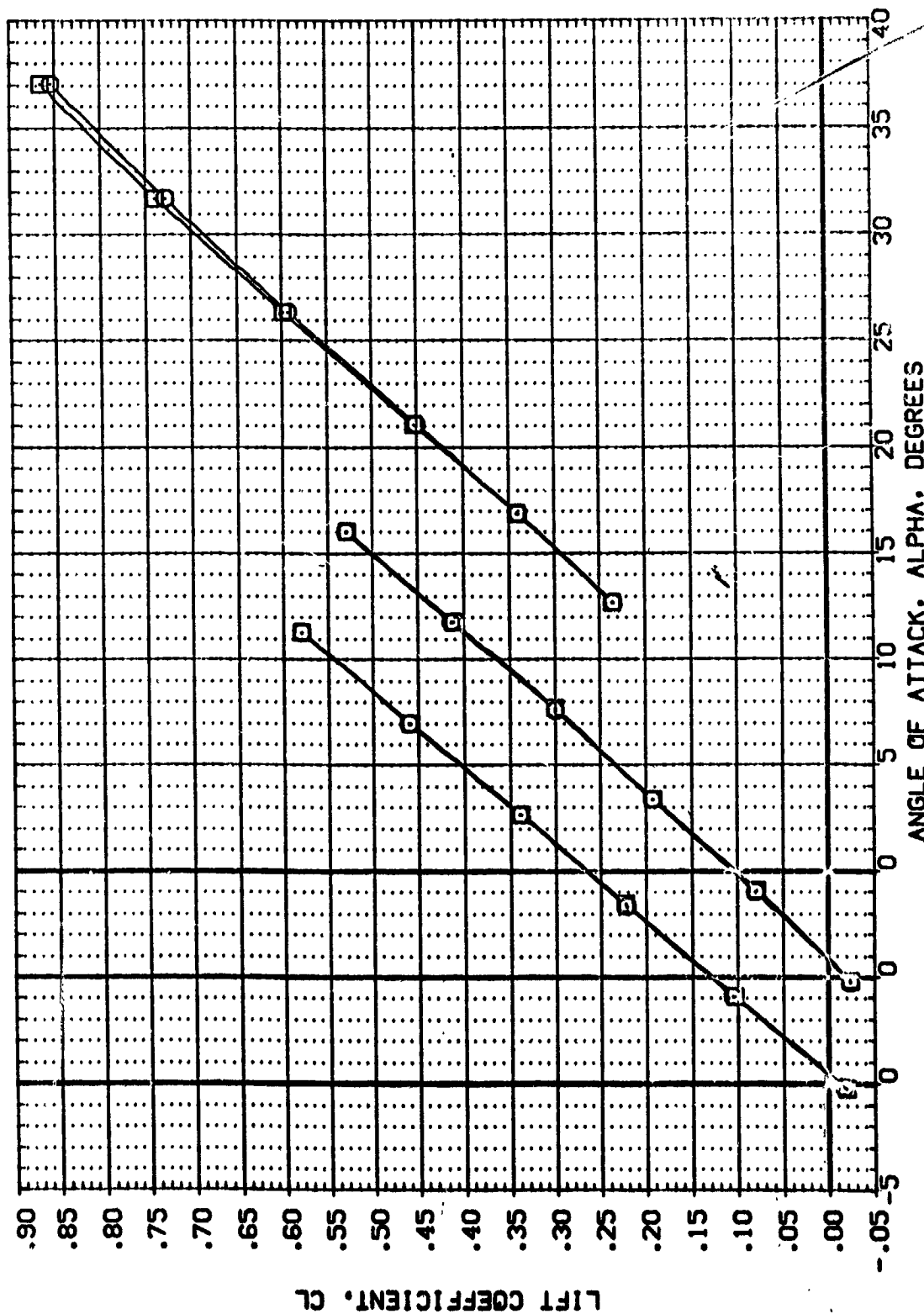
SREF	.7245	SO.FT.
LREF	7.8928	INCHES
BREF	15.1152	INCHES
XMRP	12.9510	INCHES
YMRP	.0000	INCHES
ZMRP	6.0000	INCHES
SCALE	.0150	

BETA

PO-JET	RV/L
.000	3.000
.000	3.000

DATA SET SYMBOL

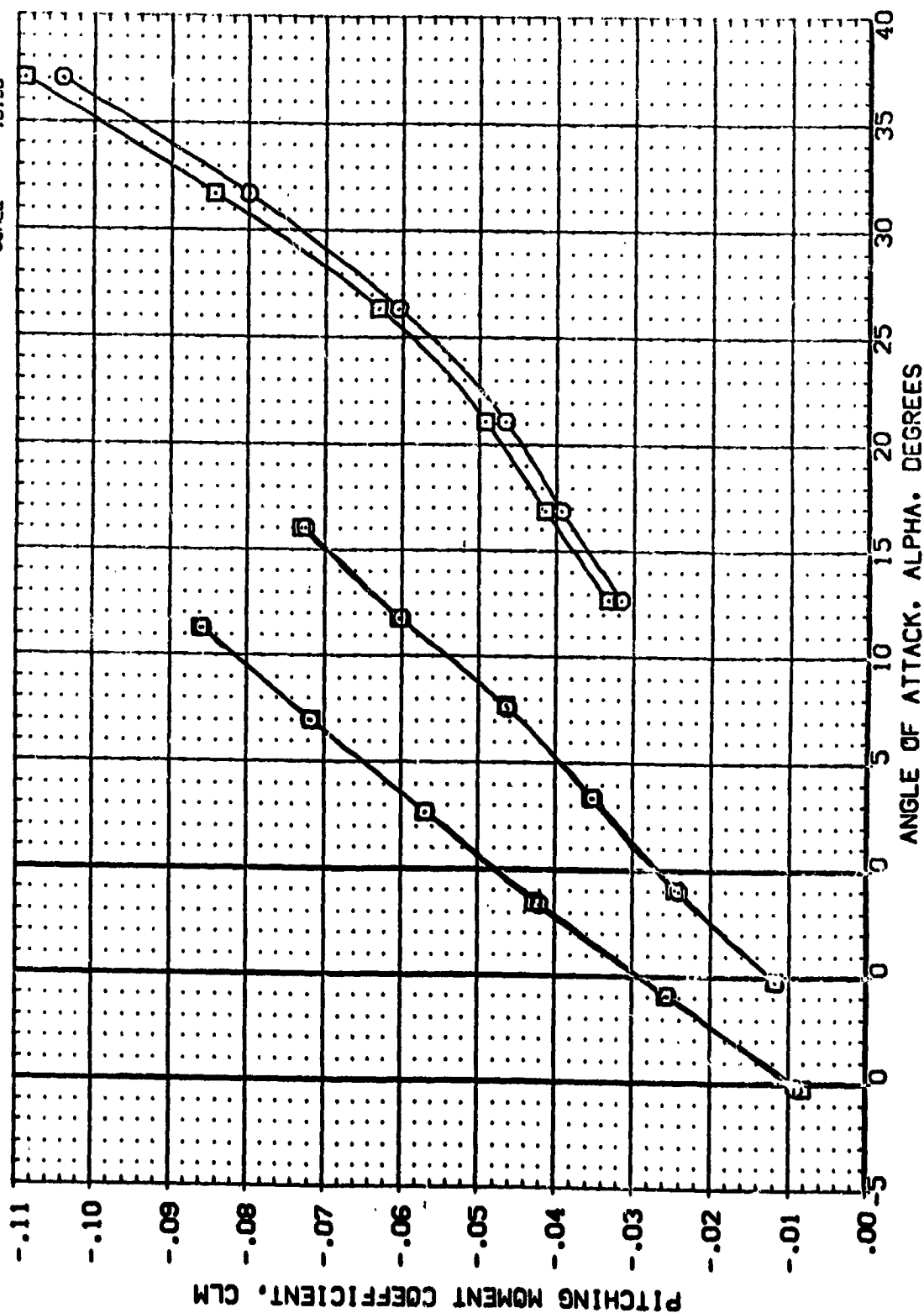
MA-7-UPVT	1031-ROCKVELL	PRR	ORB	CONF	BVTN1
MA-7-UPVT	1031-ROCKVELL	PRR	ORB	CONF	BVTN4



EFFECT OF MACH NO. ON BASIC CONFIGURATION

(A) MACH = 2.50 (B) 2.95 (C) 4.00

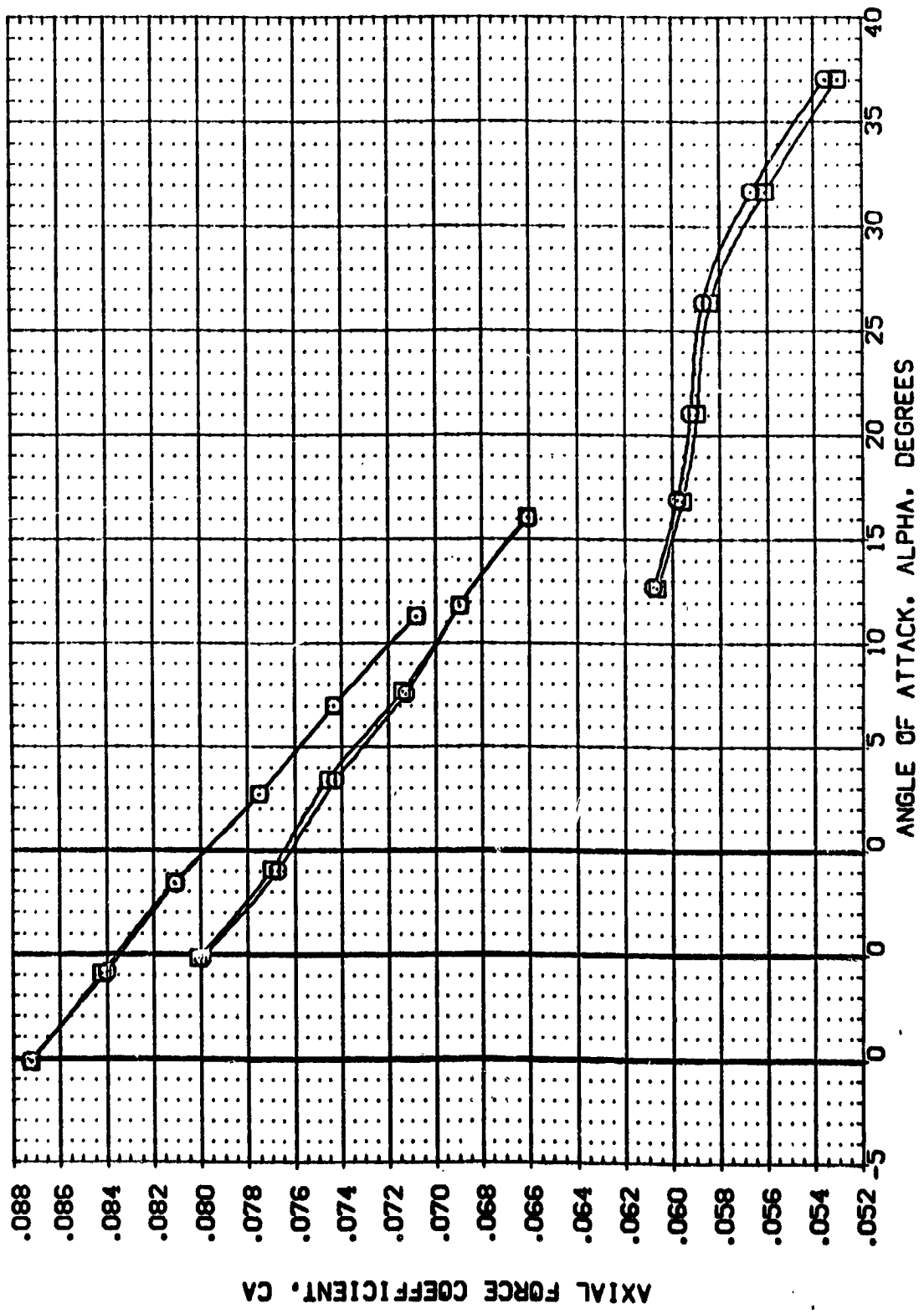
SREF	7.245	50 FT.
LREF	7.6828	INCHES
BREF	15.1152	INCHES
XMRP	12.9510	INCHES
YMRP	6.0000	INCHES
ZMRP	6.0000	INCHES
SCALE	.0150	



# EFFECT OF MACH NO. ON BASIC CONFIGURATION

(A)MACH	=	2.50 (B)	2.95 (C)	4.00
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DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA		PO-JET		RV/L		REFERENCE INFORMATION	
(BPM015)	MA-7-UPVT	1031-ROCKWELL	PRR OR8	CONF.	BVTN1	.000	.000	3.000	SREF	7245	SQ.FT.
(BPM036)	MA-7-UPVT	1031-ROCKWELL	PRR OR8	CONF.	BVTN4	.000	.000	3.000	LREF	7.8828	INCHES
									BREF	15.1152	INCHES
									XREF	12.9510	INCHES
									YREF	6.0000	INCHES
									ZREF	6.0000	INCHES
									SCALE	.0150	



EFFECT OF MACH NO. ON BASIC CONFIGURATION

(A) MACH = 2.50 (B) 2.95 (C) 4.00



DATA SET SYMBOL    CONFIGURATION DESCRIPTION    BETA    PG-JET    RN/L

(BP-016)    MA-7-UPVT 1031-ROCKWELL PRR 548. CONF.    BVTN1    .000    .000    3.000

(BP-036)    MA-7-UPVT 1031-ROCKWELL PRR 088. CONF.    BVTN4    .000    .000    3.000

REFERENCE INFORMATION

SREF    7.7245    SQ.FT.

LREF    7.8928    INCHES

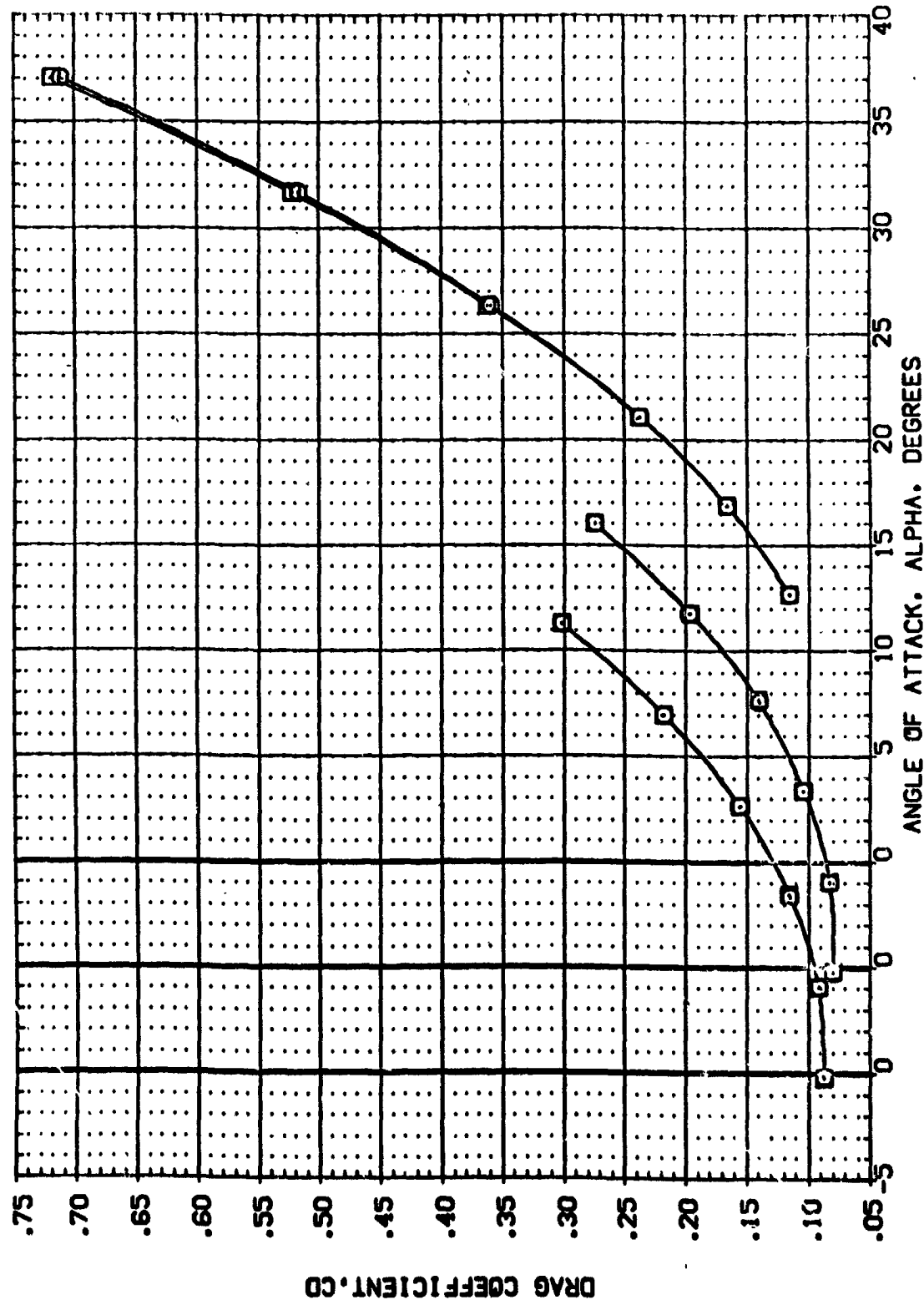
BREF    15.1152    INCHES

XPRP    12.9510    INCHES

YPRP    .0000    INCHES

ZPRP    6.0000    INCHES

SCALE    .0150



EFFECT OF MACH NO. ON BASIC CONFIGURATION

(A) MACH = 2.50 (B) 2.95 (C) 4.00

DATA SET SYMBOL: (BPC16) (BPC36) □

CONFIGURATION DESCRIPTION: MA-7. UPVT 1031. ROCKWELL PRR ORB. CONF. BVTN1 MA-7. UPVT 1031. ROCKWELL PRR ORB. CONF. BVTN4

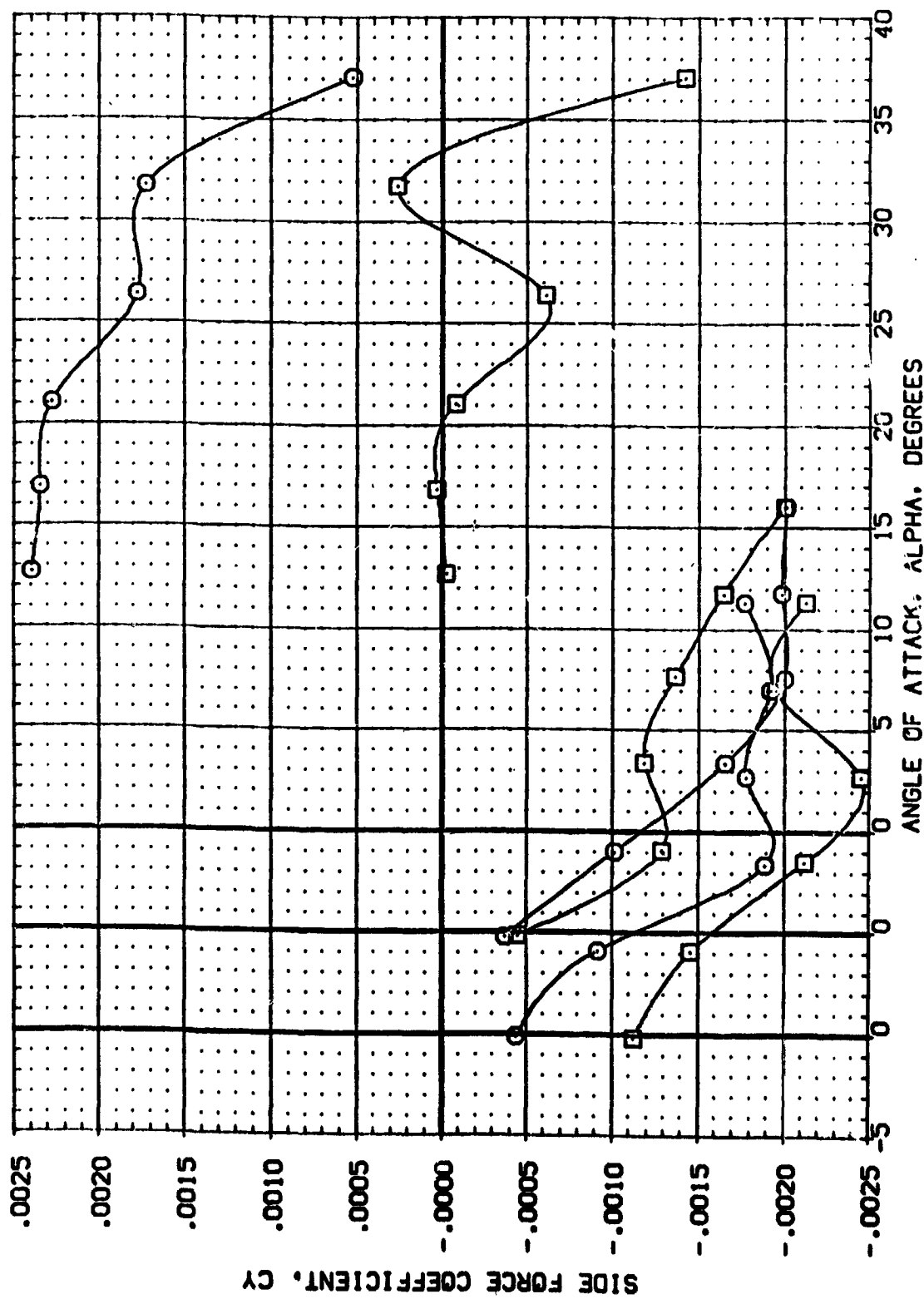
BETA: .000 .000

PO-JET: .000 .000

RNVL: 3.000 3.000

REFERENCE INFORMATION:

	SO. FT.
SREF	.7245
LREF	7.8828
BREF	15.1152
XREF	12.9510
YREF	.0000
ZREF	6.0000
SCALE	.0150



EFFECT OF MACH NO. ON BASIC CONFIGURATION

(A) MACH = 2.50 (B) 2.95 (C) 4.00

DATA SET SYMBOL: (B7016) (B7036) □

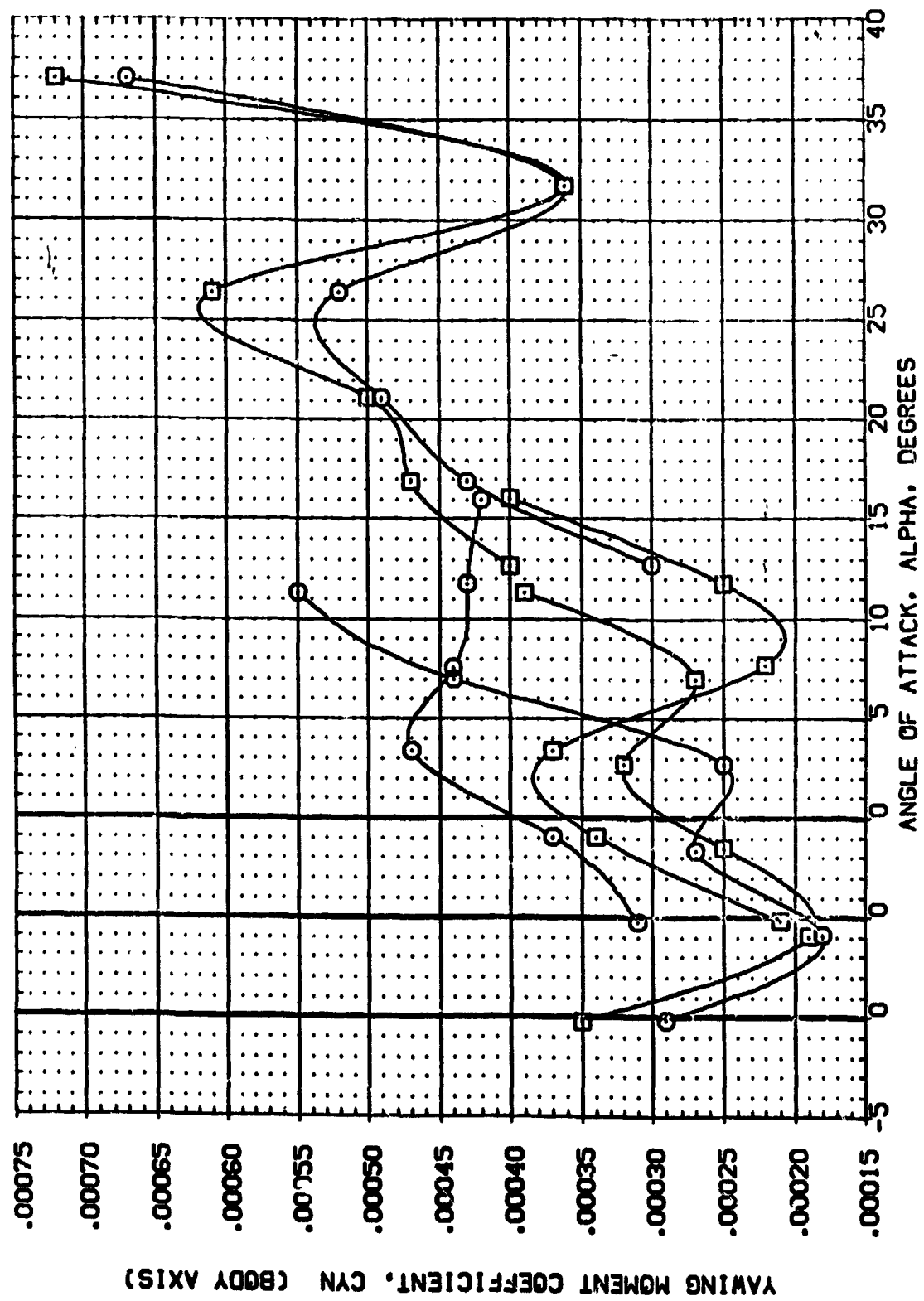
CONFIGURATION DESCRIPTION: MA-7,UPVT 1031,ROCKWELL PRR DRB. CONF: BVTN1  
 MA-7,UPVT 1031,ROCKWELL PRR DRB. CONF: BVTN4

BETA: .000 .000

PO-JET: .000 .000

RVAL: 3.000 3.070

REFERENCE INFORMATION: SREF: .7245 SO.FT. INCHES  
 LREF: 7.8828 INCHES  
 BREF: 15.1152 INCHES  
 XMRP: 12.9510 INCHES  
 YMRP: .0000 INCHES  
 ZMRP: 6.0000 INCHES  
 SCALE: .0150



EFFECT OF MACH NO. ON BASIC CONFIGURATION

(A) MACH = 2.50 (B) 2.95 (C) 4.00

## NOTATION: CONVERSION



(A)MACH = 2.50 (B) 2.95 (C) 4.00

DATA SET SYMBOL: (BP-016) (BP-036) □

CONFIGURATION DESCRIPTION: MA-7, UPVT 1031, ROCKWELL PRR 038, CONF. BVTM1; MA-7, UPVT 1031, ROCKWELL PRR 038, CONF. BVTM4

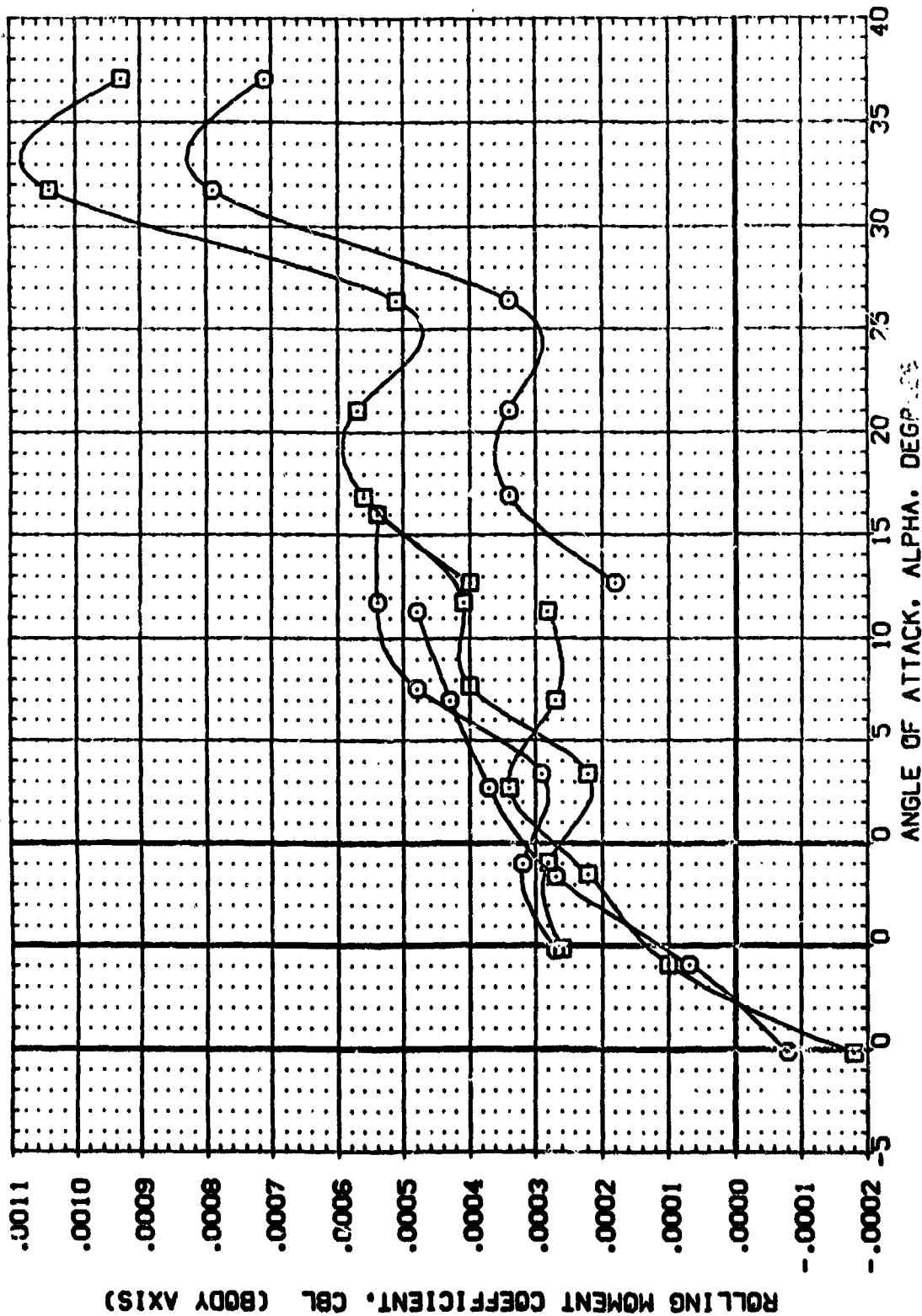
BETA: .000 .000

PO-JET: .000 .000

RN/L: 3.000 3.000

REFERENCE INFORMATION:

SREF	.7245	SO. FT.
LREF	7.8828	INCHES
BREF	15.1152	INCHES
XGRP	12.3510	INCHES
YGRP	0.0000	INCHES
ZGRP	6.0000	INCHES
SCALE	.0150	



EFFECT OF MACH NO. ON BASIC CONFIGURATION

(A) MACH = 2.50 (B) 2.95 (C) 4.00



DATA SET SYMBOL: (BPH015) (BPH035) □

CONFIGURATION DESCRIPTION: NA-7-LPVT 1031, ROXVELL PRR DRB. CONF: BVTN4  
NA-7-LPVT 1031, ROXVELL PRR DRB. CONF: BVTN4

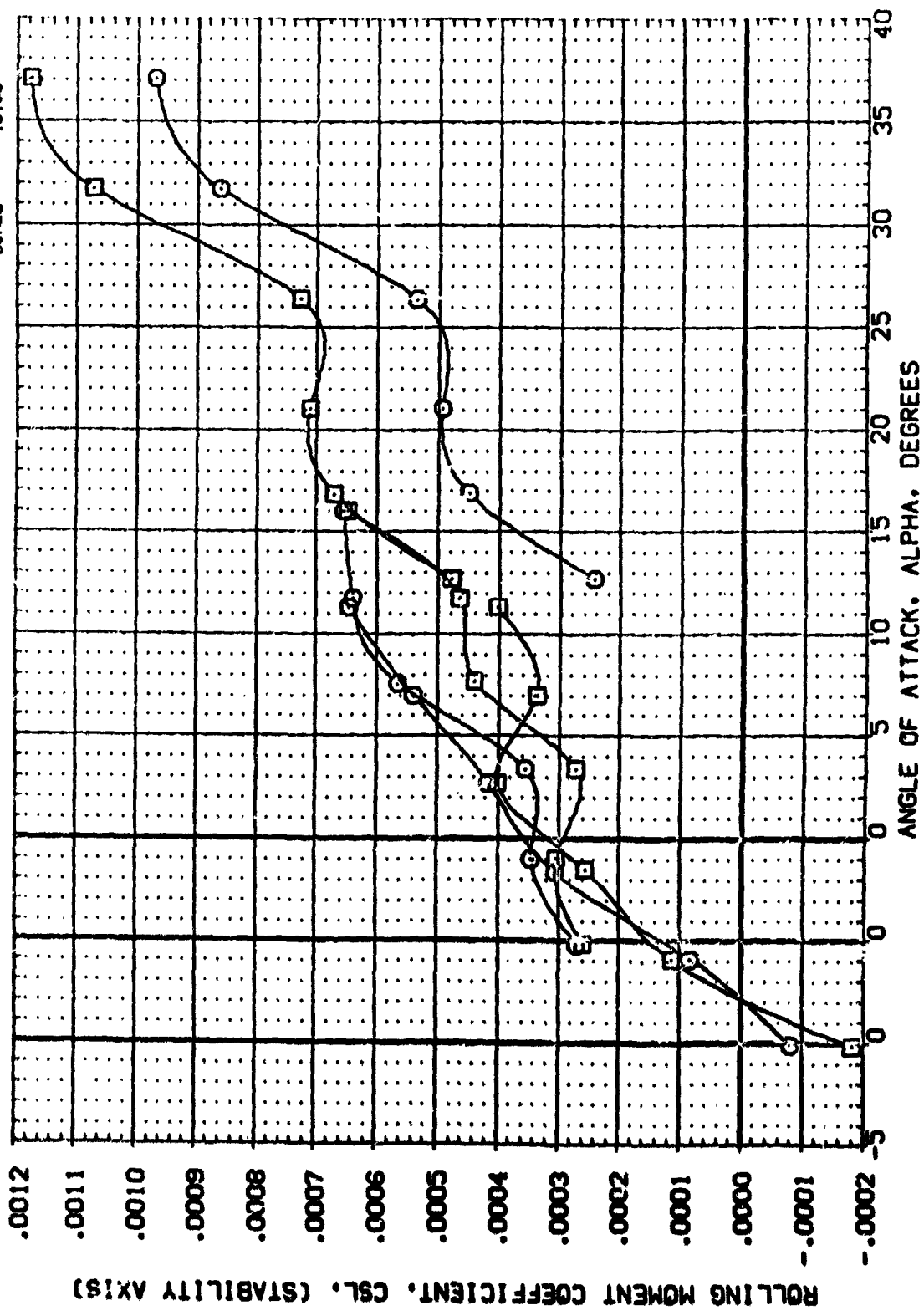
BETA: .000 .000

PO-JET: .000 .000

RN/L: 3.000 3.000

REFERENCE INFORMATION:

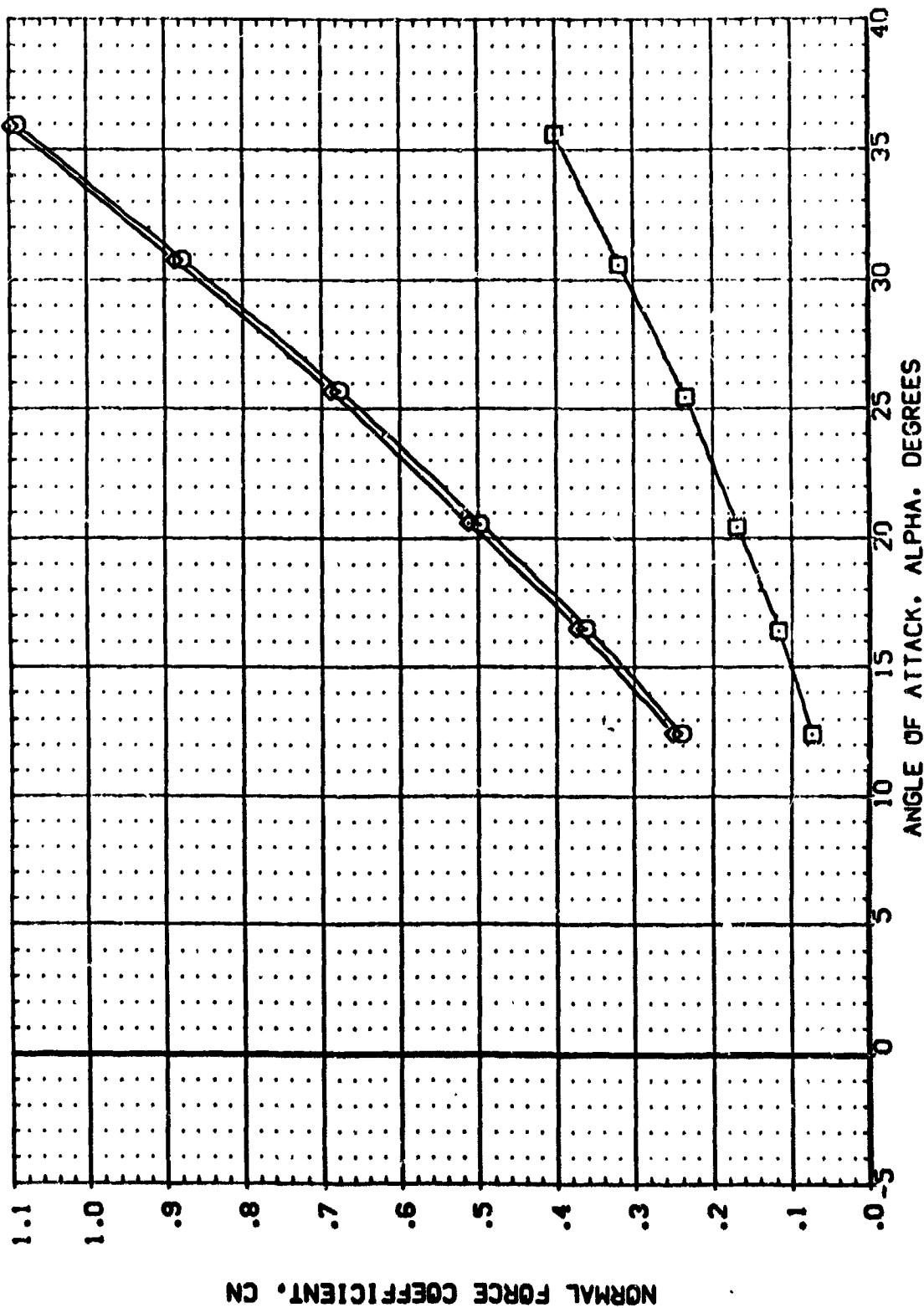
	7245	SG.FT.
SREF	7.8828	15.1152
LREF	12.9510	6.0000
XRRP	6.0000	.0150
YRRP		
ZRRP		
SCALE		



EFFECT OF MACH NO. ON BASIC CONFIGURATION

(A) MACH = 2.50 (B) 2.95 (C) 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	R/V/L	REFERENCE INFORMATION
(CP058)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF: BVTN40	.000	.000	1.000	SREF 7245 50. FT
(CP059)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF: BVTN40	.000	.000	1.000	LREF 7.6828 INCHES
(CP070)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF: BVTN41	.000	.000	1.000	BREF 15.1152 INCHES
					XREF 12.9510 INCHES
					YREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150



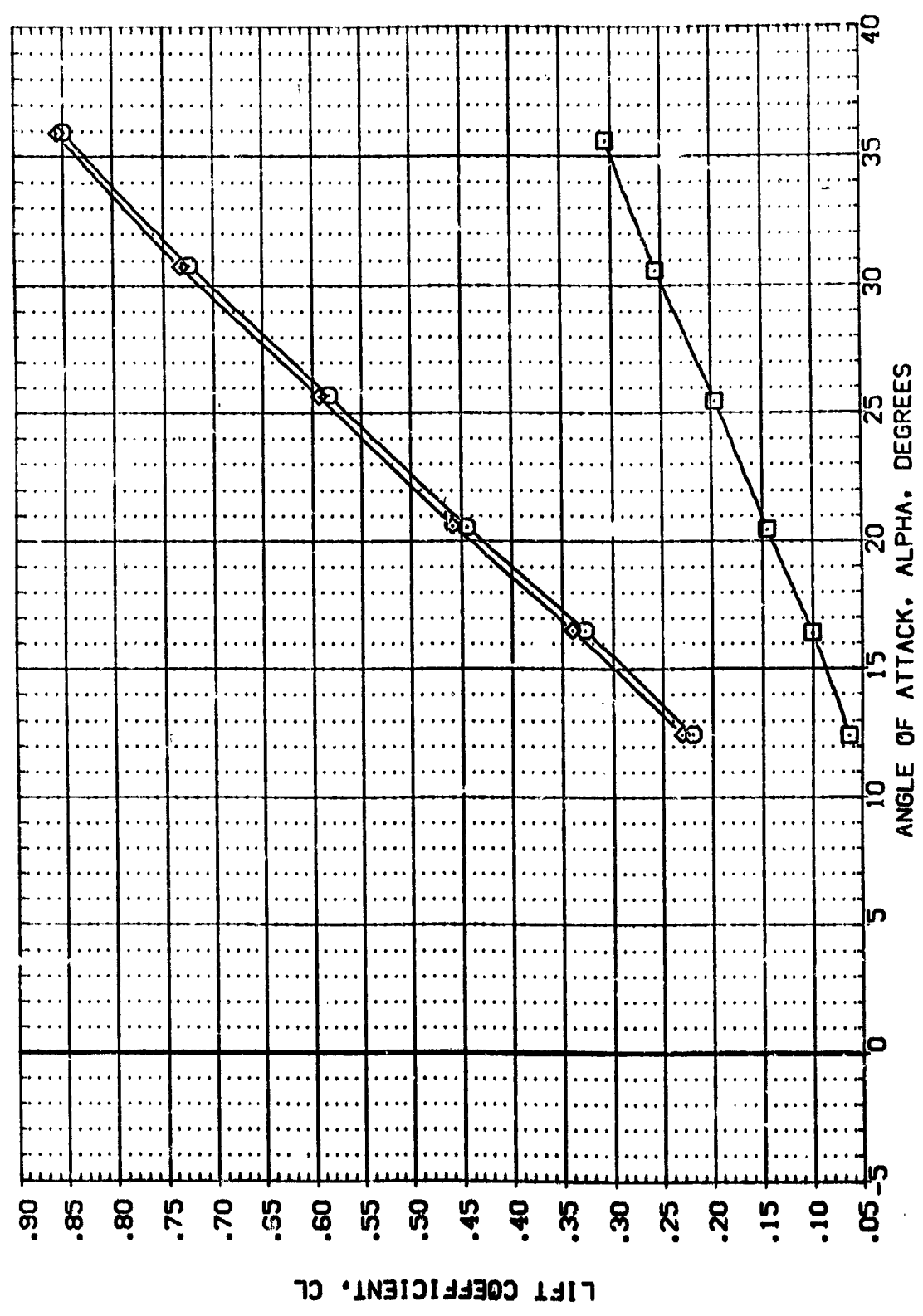
EFFECT OF WING  
(A) MACH = 4.00

REFERENCE INFORMATION  
 SREF .7245 CO.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 YMRP 12.9510 INCHES  
 ZMRP 6.0000 INCHES  
 SCALE .0150

PO-JET RN/L  
 .000 1.000  
 .000 1.000  
 .000 1.000

BETA  
 .000  
 .000  
 .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (CPM78) MA-7, UPVT 1031, ROCKWELL PRR ORB. CONF.  
 (CPM74) MA-7, UPVT 1031, ROCKWELL PRR ORB. CONF.  
 (CPM70) MA-7, UPVT 1031, ROCKWELL PRR ORB. CONF.



EFFECT OF WING  
 (A)MACH = 4.00



DATA SET SYMBOL    CONFIGURATION DESCRIPTION    CONF.    BVTN40    BVTN40    BVTN41    BETA    PG-JET    RV/L    REFERENCE INFORMATION

(CPH058)    MA-7, UPVT 1031, ROCKWELL PRR 088.    CONF.    BVTN40    BVTN40    BVTN41    .000    .000    1.000    SREF    7245    SQ.FT.

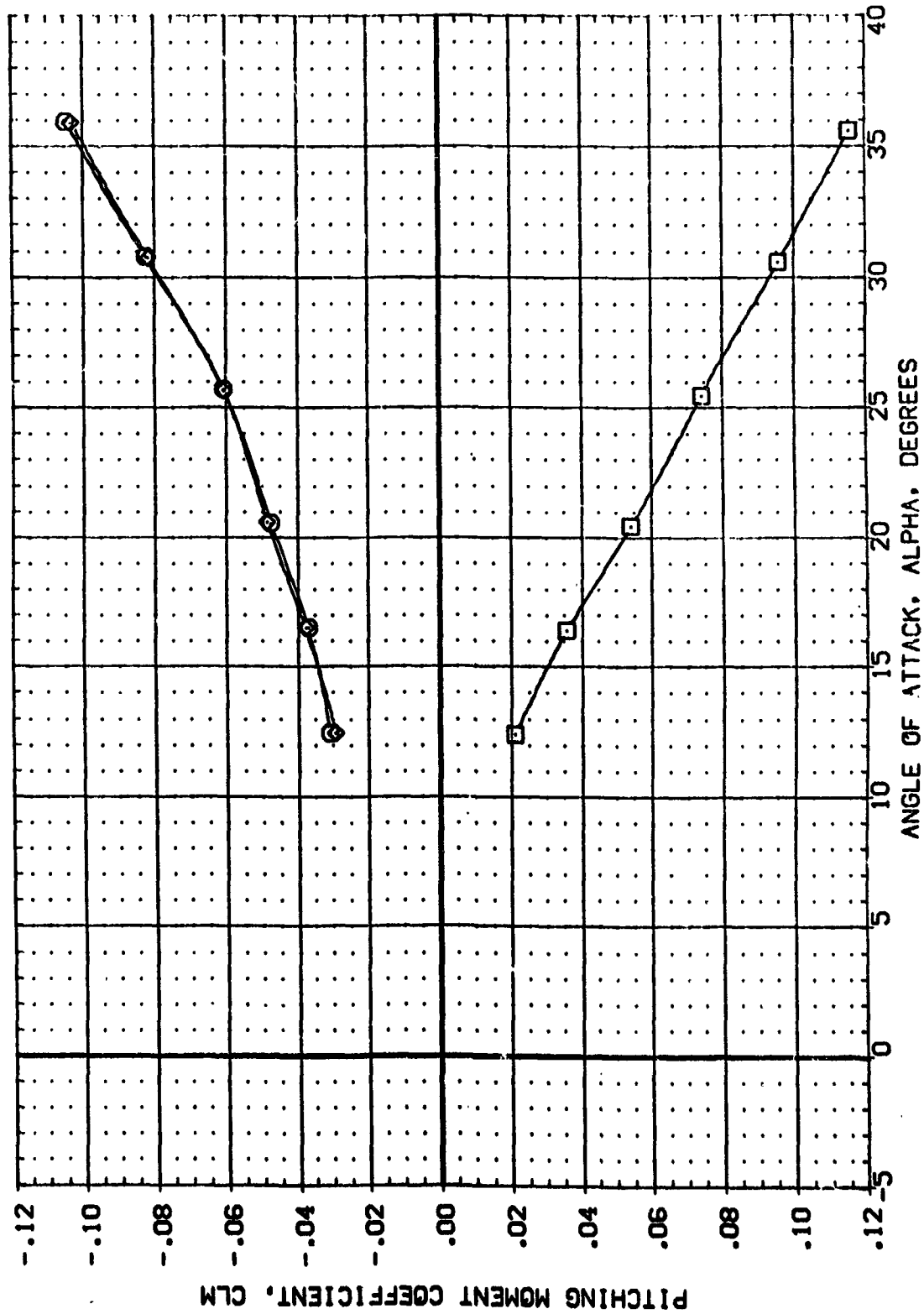
(CPH004)    MA-7, UPVT 1031, ROCKWELL PRR 088.    CONF.    BVTN40    BVTN40    BVTN41    .000    .000    1.000    LREF    7.6828    INCHES

(CPH070)    MA-7, UPVT 1031, ROCKWELL PRR 088.    CONF.    BVTN40    BVTN40    BVTN41    .000    .000    1.000    XREF    15.1152    INCHES

YREF    12.5510    INCHES

ZREF    6.0000    INCHES

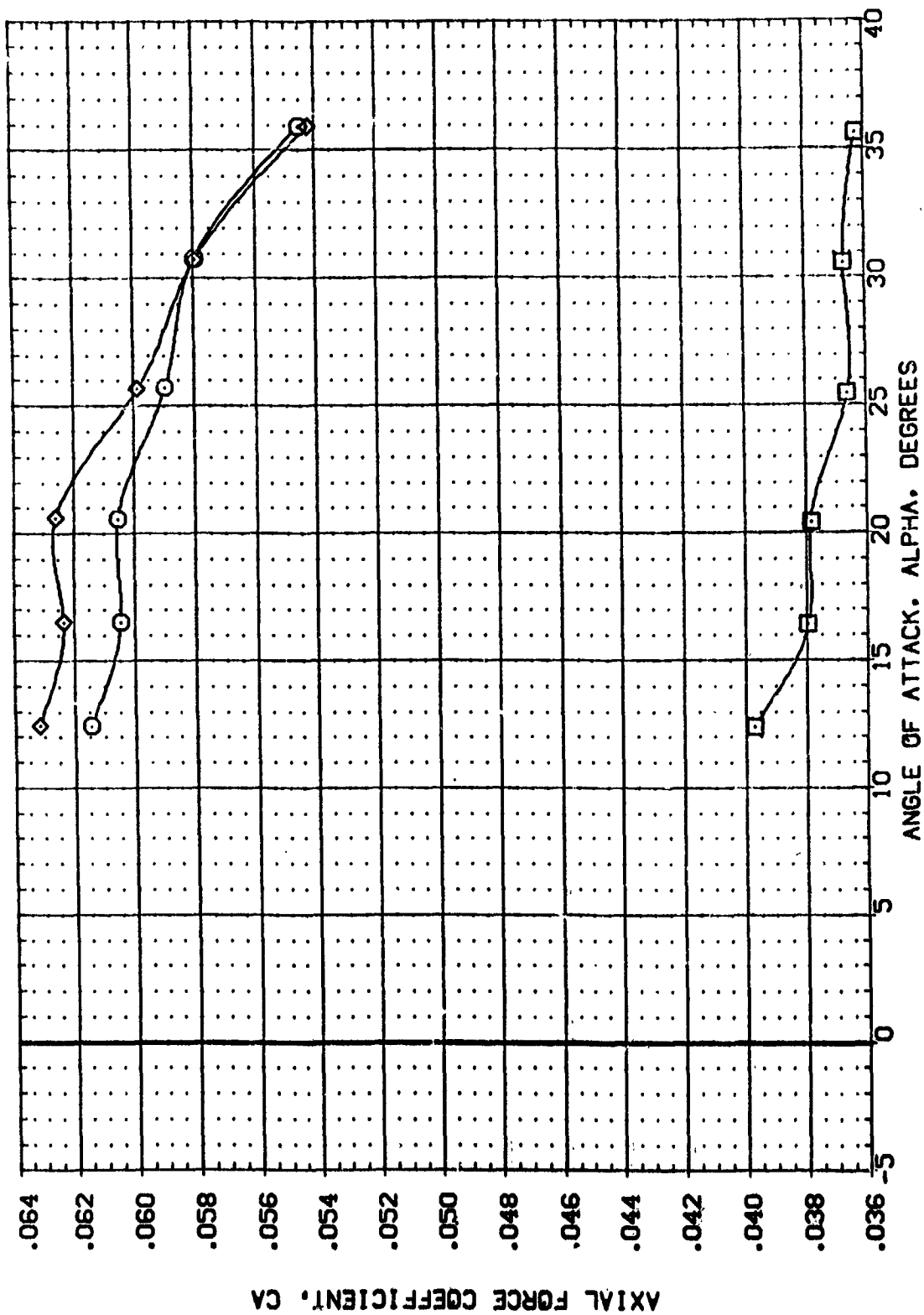
SCALE    .0150



EFFECT OF WING

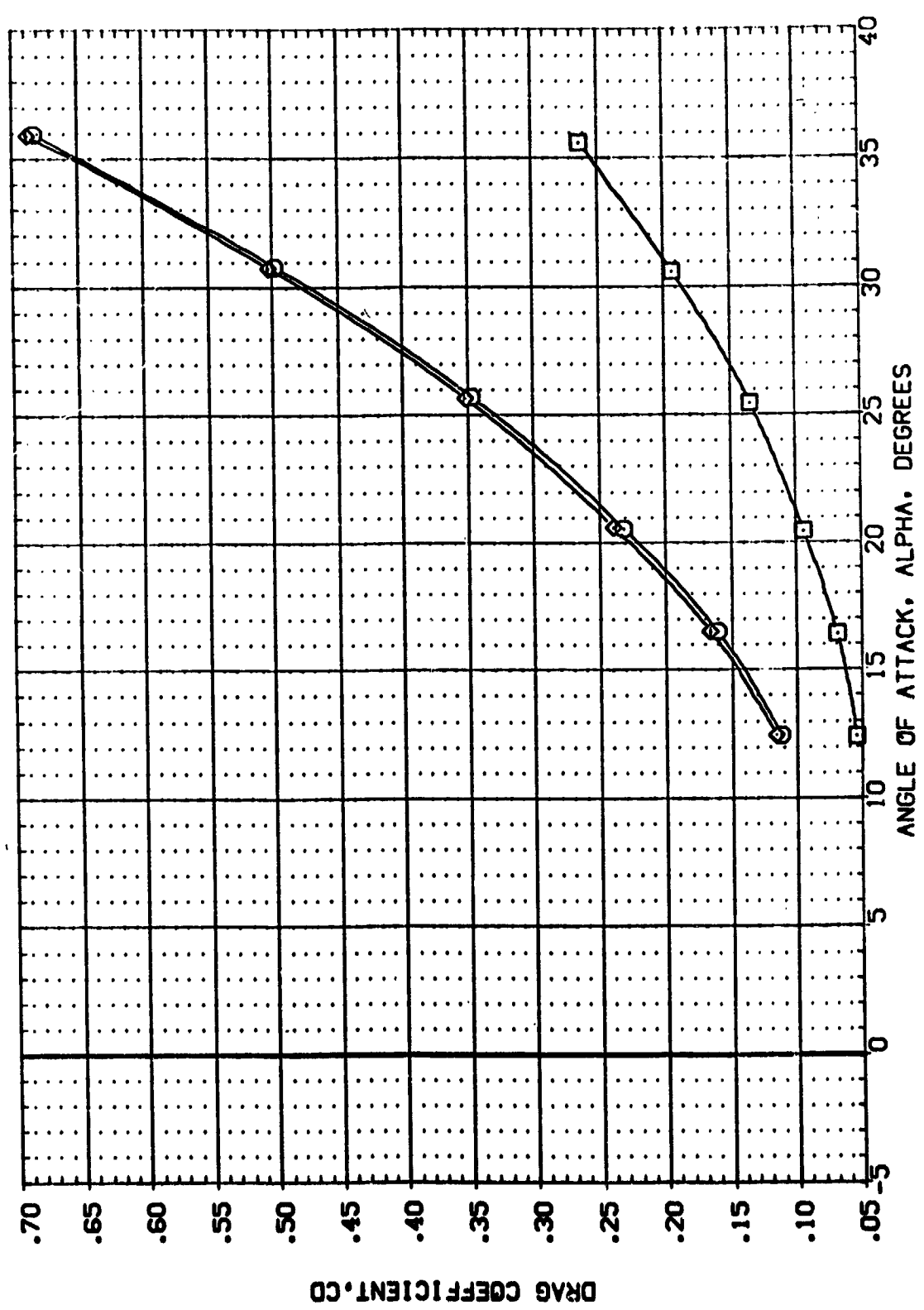
(M)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPM058)	MA-7. UPVT 1031. ROCKWELL PRR CR8. CONF.	.000	.000	1.000	SREF 7245 SQ. FT.
(CPM004)	MA-7. UPVT 1031. ROCKWELL PRR CR8. CONF.	.000	.000	1.000	LREF 7.8828 INCHES
(CPM070)	MA-7. UPVT 1031. ROCKWELL PRR CR8. CONF.	.000	.000	1.000	BREF 15.1152 INCHES
					YARP 12.9510 INCHES
					ZARP .0000 INCHES
					SCALE 6.0000 INCHES



EFFECT OF WING  
(A) MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH058)	MA-7, UPVT 1031, ROCKWELL PRR DRB. CONF. BVTN40	.000	.000	1.000	SREF 7245 50 FT.
(CPH004)	MA-7, UPVT 1031, ROCKWELL PRR DRB. CONF. BVTN40	.000	.000	1.000	LREF 7.8928 INCHES
(CPH070)	MA-7, UPVT 1031, ROCKWELL PRR DRB. CONF. BVTN41	.000	.000	1.000	BREF 15.1152 INCHES
					XMRP 12.9510 INCHES
					YMRP 6.0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



EFFECT OF WING  
(A)MACH = 4.00

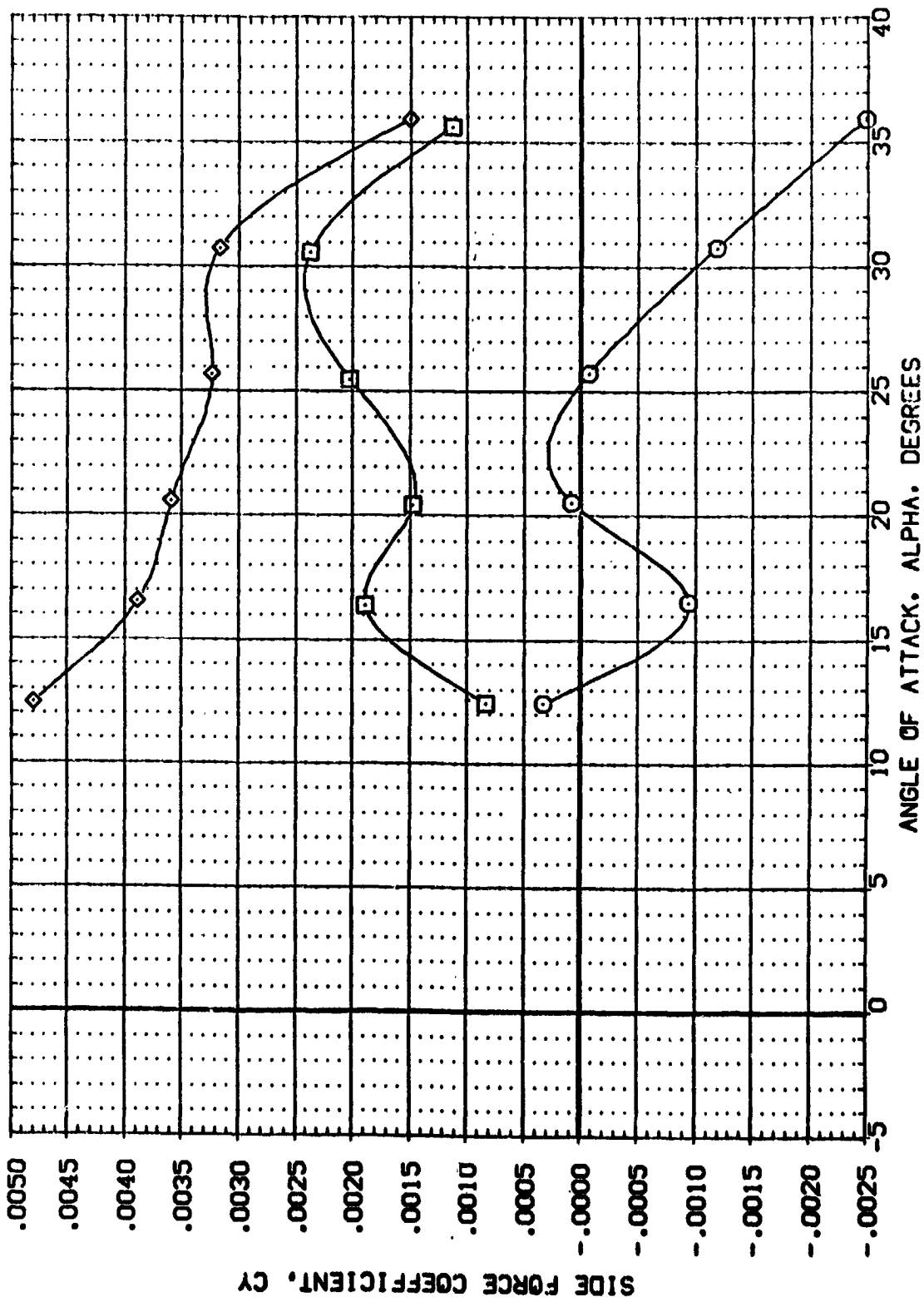
# DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CPH058) □  
(CPH004) □  
(CPH070) □

MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF. BITN40  
MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF. BITN40  
MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF. BITN41

BETA PO-JET RV/L  
.000 .000 1.000  
.000 .000 1.000  
.000 .000 1.000

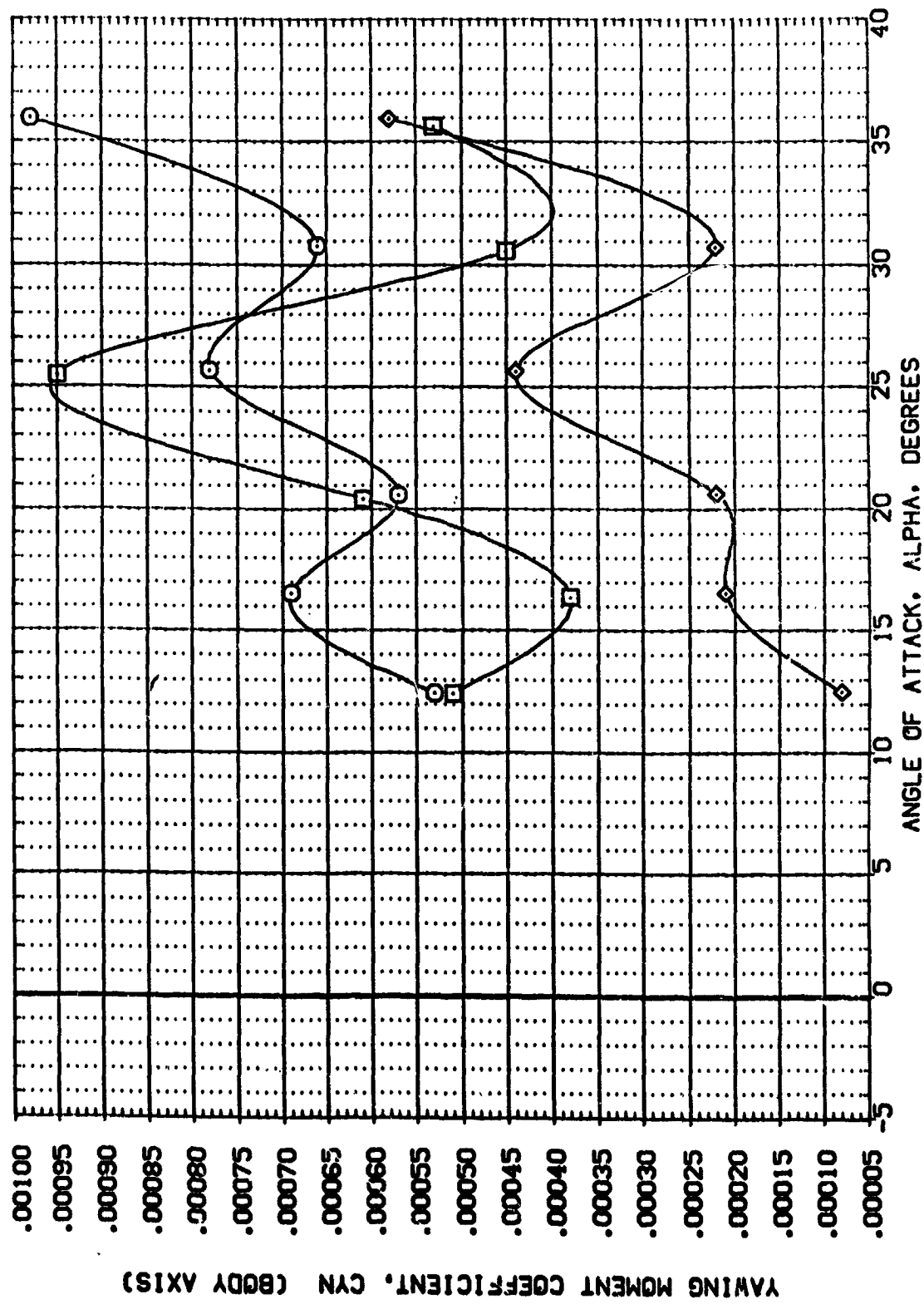
REFERENCE INFORMATION  
SREF 7245 50. FT.  
LREF 7.5828 INCHES  
BREF 15.1152 INCHES  
XPRP 12.9516 INCHES  
YPRP .0000 INCHES  
ZPRP 6.0000 INCHES  
SCALE .0150



EFFECT OF WING

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH058)	MA-7, UPVT 1031, ROCKWELL	.000	.000	1.000	SREF 7.245 SQ. FT.
(CPH004)	MA-7, UPVT 1031, ROCKWELL	.000	.000	1.000	LREF 7.8828 INCHES
(CPH070)	MA-7, UPVT 1031, ROCKWELL	.000	.000	1.000	BREF 15.1152 INCHES
					XMREF 12.9510 INCHES
					YMREF 6.0000 INCHES
					ZMREF 6.0000 INCHES
					SCALE .0150



EFFECT OF WING

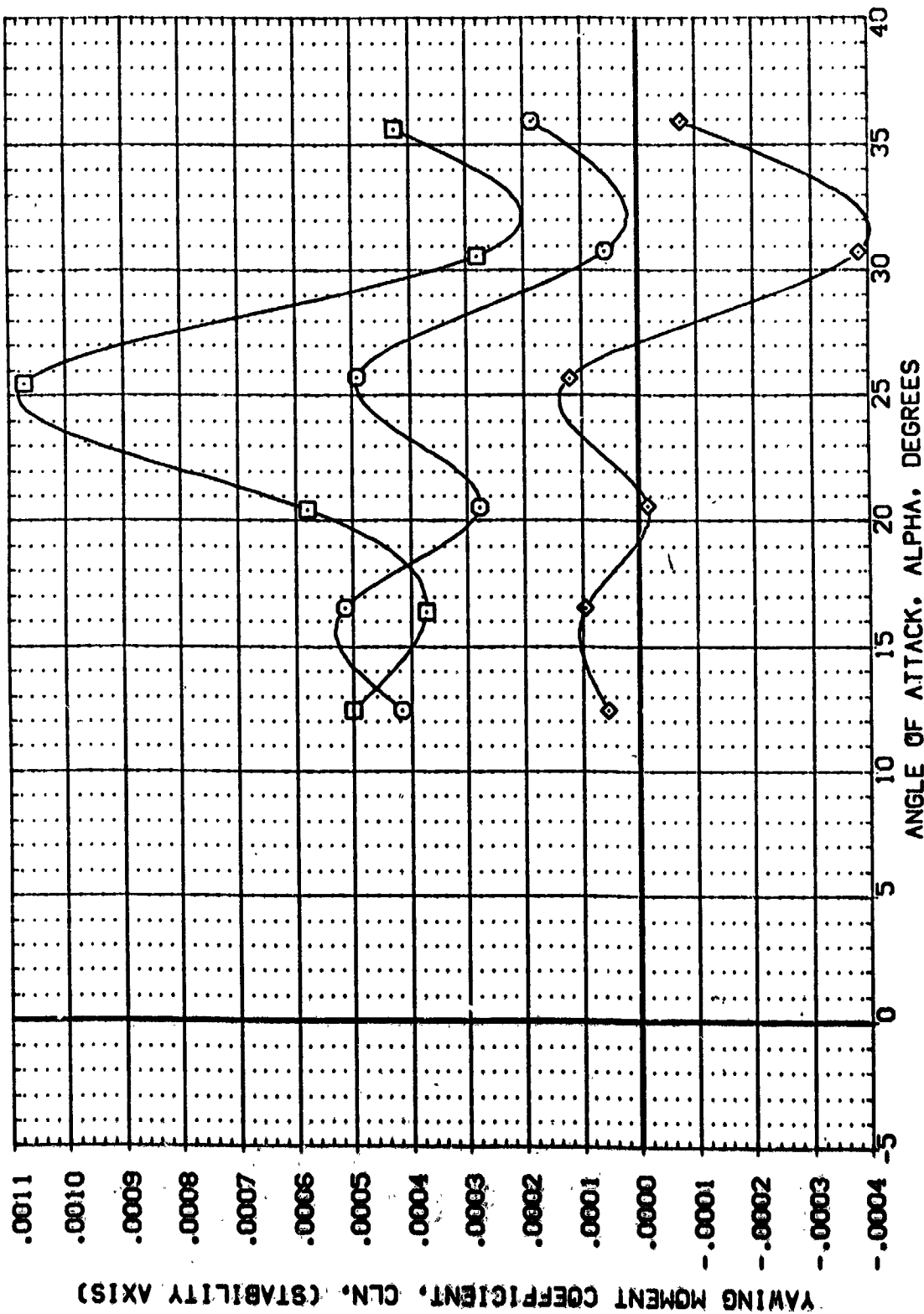
(A)MACH = 4.00



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (CP058) MA-7, UPVT 1031, ROCKWELL PRR C88, CONF. BVTN40  
 (CP059) MA-7, UPVT 1031, ROCKWELL PRR C88, CONF. BVTN40  
 (CP070) MA-7, UPVT 1031, ROCKWELL PRR C88, CONF. BVTN41

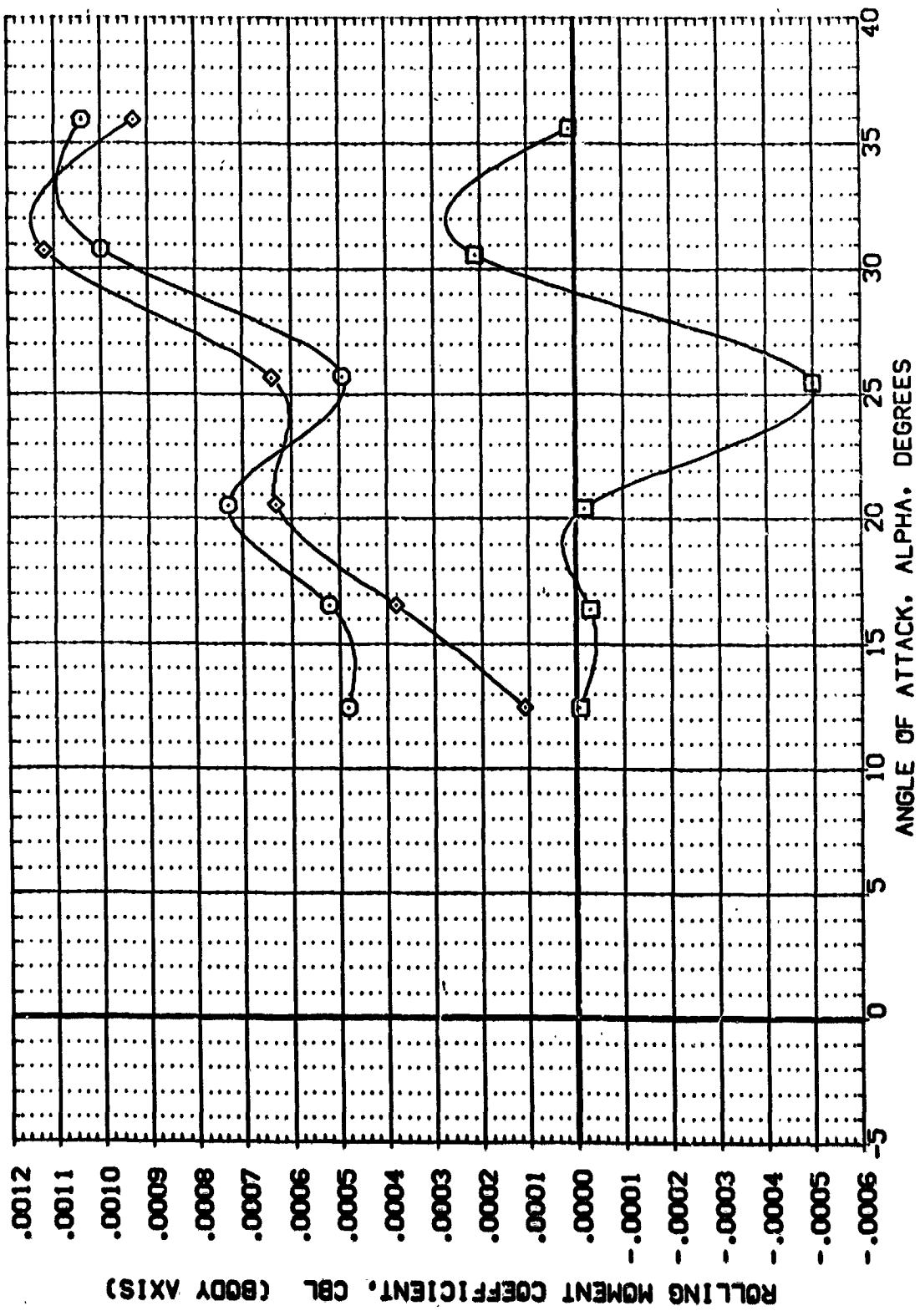
BETA PO-JET RN/L  
 .000 .000 1.000  
 .000 .000 1.000  
 .000 .000 1.000

REFERENCE INFORMATION  
 SREF .7245 SQ. FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XMRP 12.9510 INCHES  
 YMRP 6.0000 INCHES  
 ZMRP .0150 INCHES  
 SCALE



EFFECT OF WING  
 (MACH = 4.00)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RM/L	REFERENCE INFORMATION
(CH058)	MA-7-UPVT 1031-ROCKWELL PRR 058	.000	.000	1.000	SRE: 7245 SQ.FT.
(CH059)	MA-7-UPVT 1031-ROCKWELL PRR 059	.000	.000	1.000	LRE: 7.8928 INCHES
(CH060)	MA-7-UPVT 1031-ROCKWELL PRR 060	.000	.000	1.000	BREF: 15.1152 INCHES
					YMRP: 12.9516 INCHES
					ZMRP: 6.0000 INCHES
					SCALE: .0150



EFFECT OF WING

(A)MACH = 4.00

DATA SET SYMBOL: (CPH058) (CPH064) (CPH070)

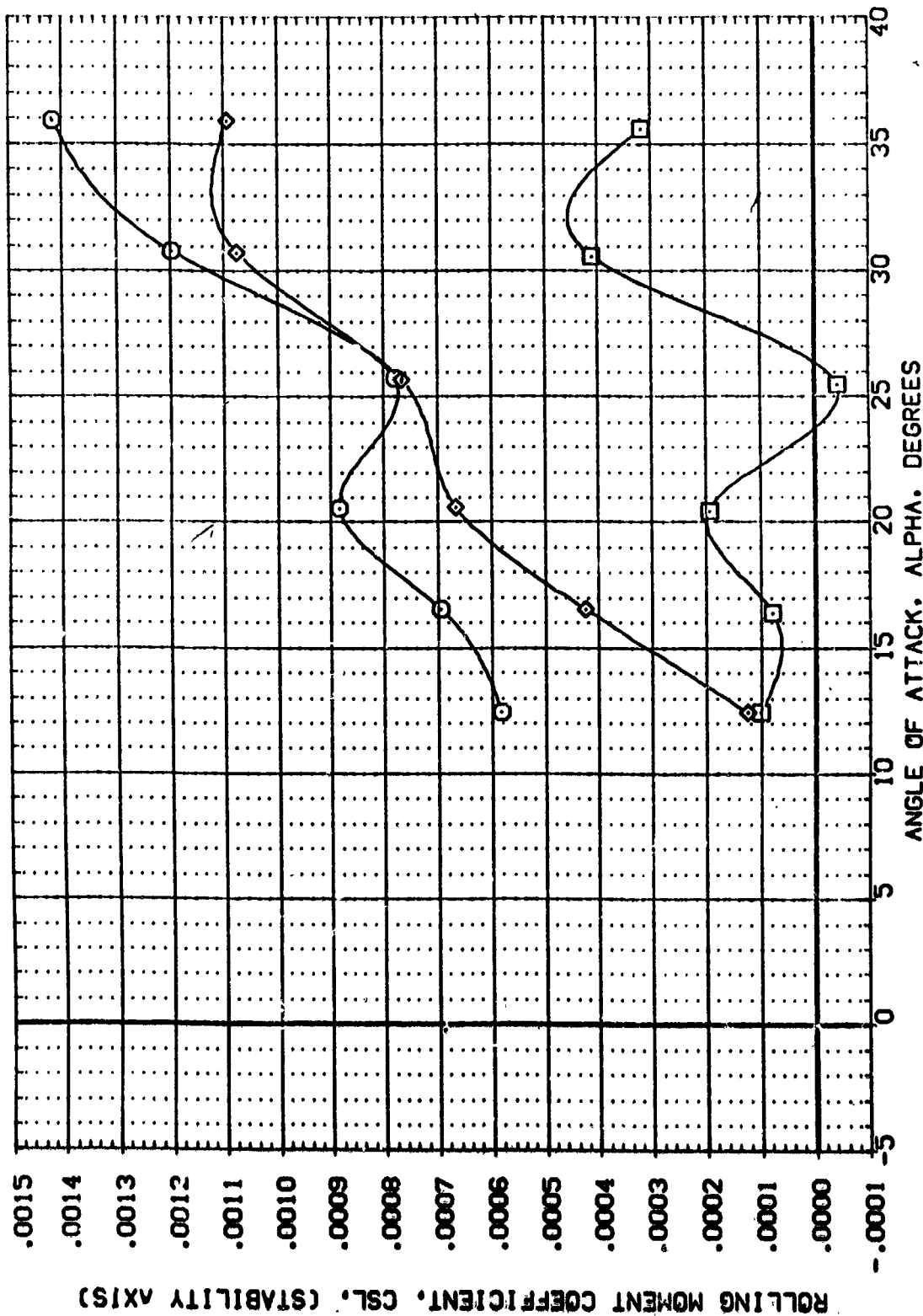
CONFIGURATION DESCRIPTION: MA-7, UPVT 1031, ROCKWELL PRR ORB: CONF: BVTN40 BTN40 BVTN41

PO-JET: .000 .000 .000

BETA: .000 .000 .000

RV/L: 1.000 1.000 1.000

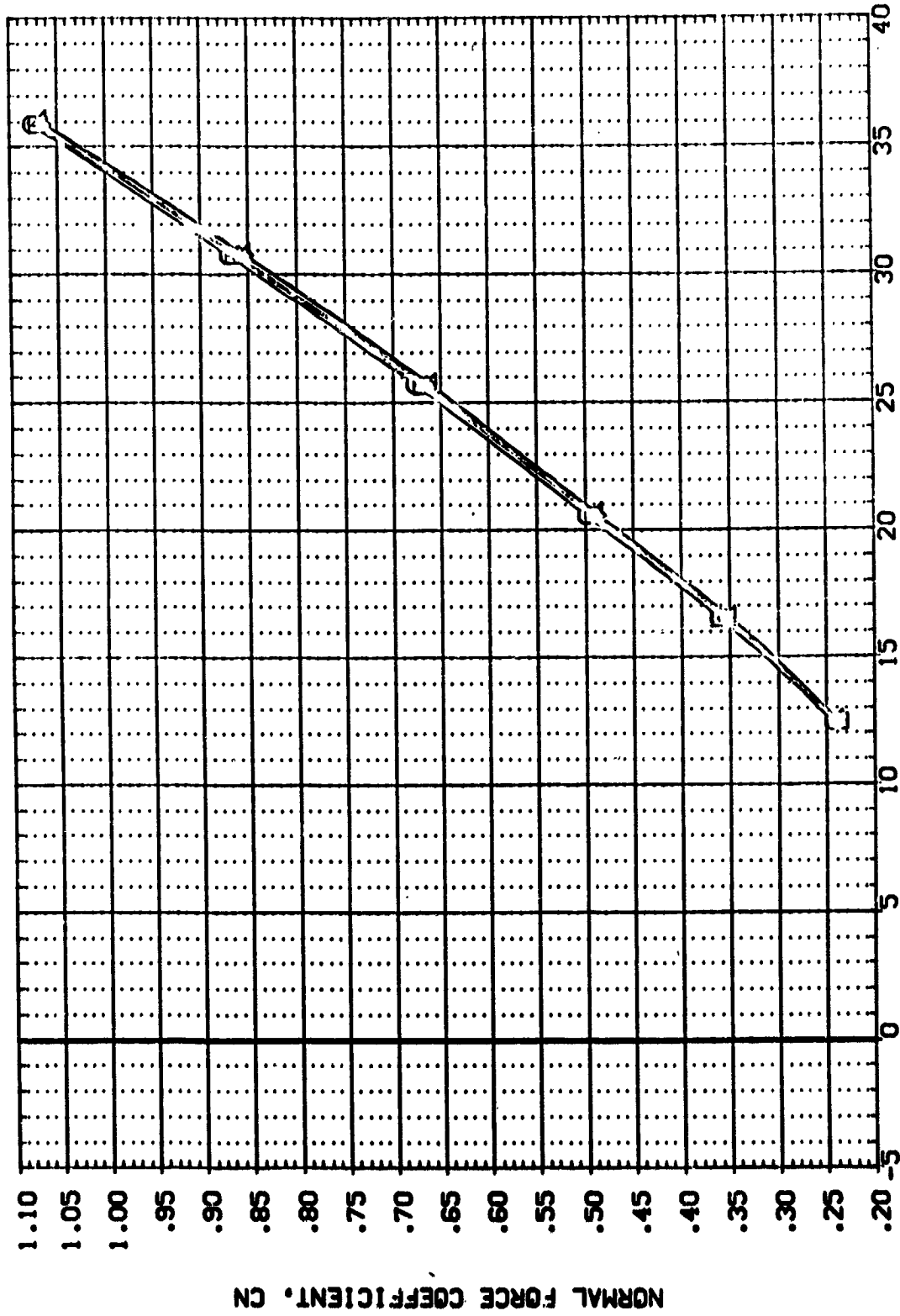
REFERENCE INFORMATION: SREF: 7245 SQ. FT. LREF: 7.8828 INCHES BREF: 15.1152 INCHES XMRP: 12.9510 INCHES YMRP: .0000 INCHES ZMRP: 6.0000 INCHES SCALE: .0150



EFFECT OF WING  
(M)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVL	REFERENCE INFORMATION
(CP021)	MA-7, UPVT 1031, ROCKWELL	.000	.000	1.000	SREF 7245 50. FT.
(CP026)	MA-7, UPVT 1031, ROCKWELL	.000	35.000	1.000	LREF 7.8828 INCHES
(CP029)	MA-7, UPVT 1031, ROCKWELL	.000	188.000	1.000	BREF 15.1152 INCHES
(CP030)	MA-7, UPVT 1031, ROCKWELL	.000	310.000	1.000	XREF 12.8510 INCHES
(CP035)	MA-7, UPVT 1031, ROCKWELL	.000	600.000	1.000	YREF .0000 INCHES
					ZREF .0150 INCHES
					SCALE

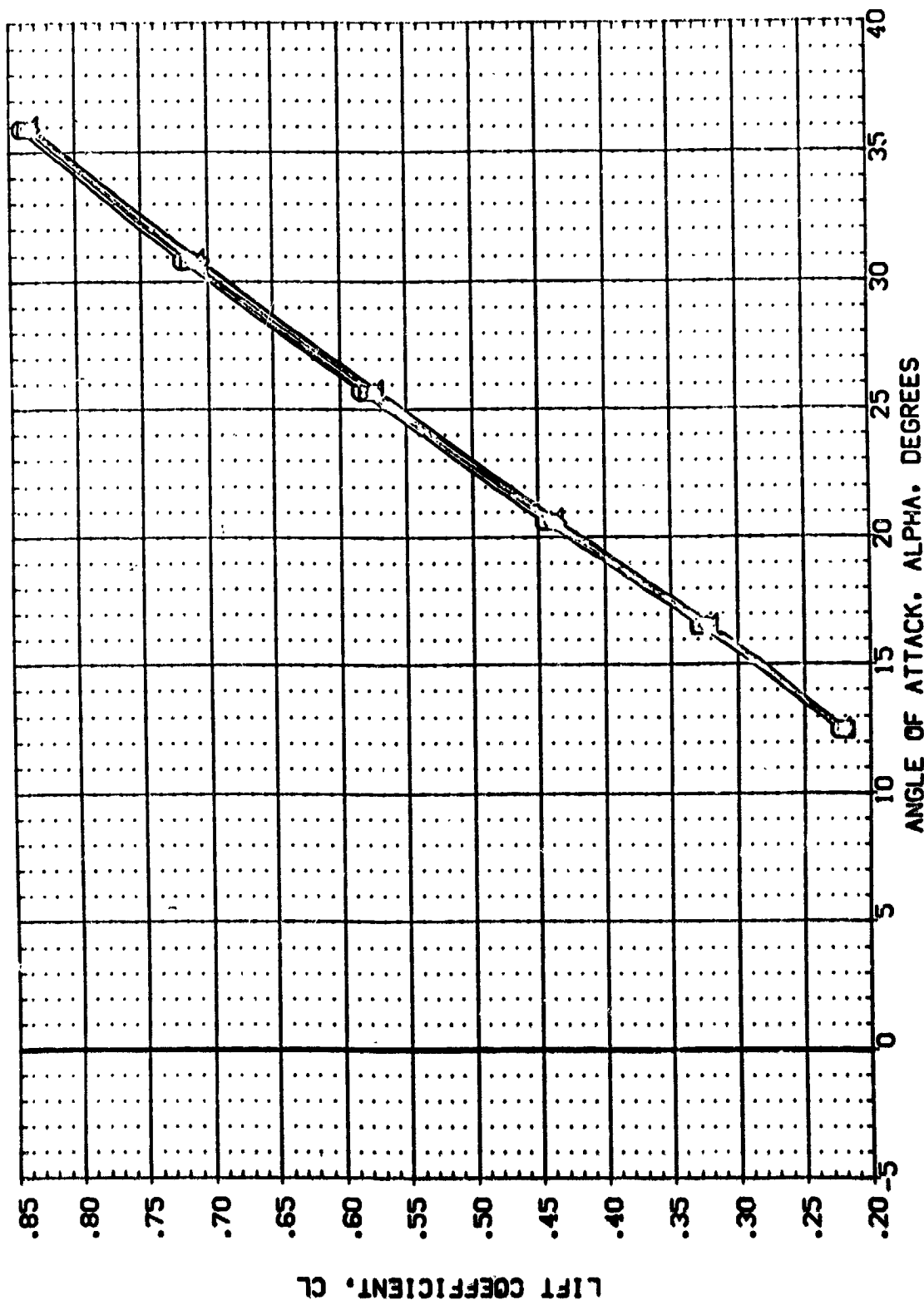


ANGLE OF ATTACK, ALPHA, DEGREES

### EFFECT OF YAW NOZZLE PRESSURE

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RV/L	REFERENCE INFORMATION
(CP4021)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONF. BVTNI	.000	.000	1.000	SREF 7245 SQ. FT.
(CP4026)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONF. BVTNI	.000	35.000	1.000	LREF 7.8828 INCHES
(CP4029)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONF. BVTNI	.000	188.000	1.000	BREF 15.1152 INCHES
(CP4030)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONF. BVTNI	.000	310.000	1.000	XPRP 12.9510 INCHES
(CP4035)	MA-7, UPVT 1031, ROCKWELL PRR CR8, CONF. BVTNI	.000	600.000	1.000	YPRP 6.0000 INCHES
					ZPRP .0150 INCHES
					SCALE

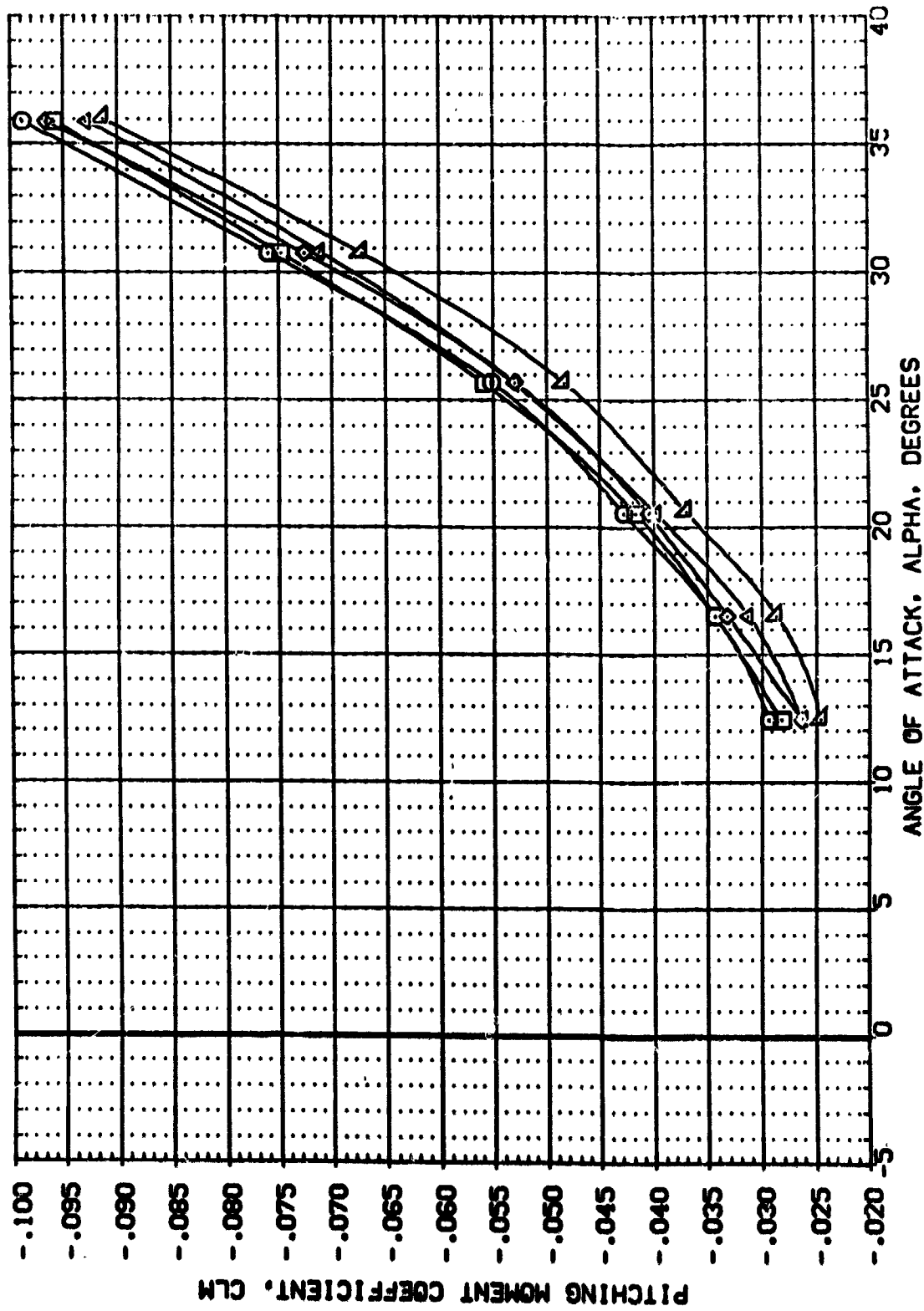


EFFECT OF YAW NOZZLE PRESSURE

(A)MACH = 4.00



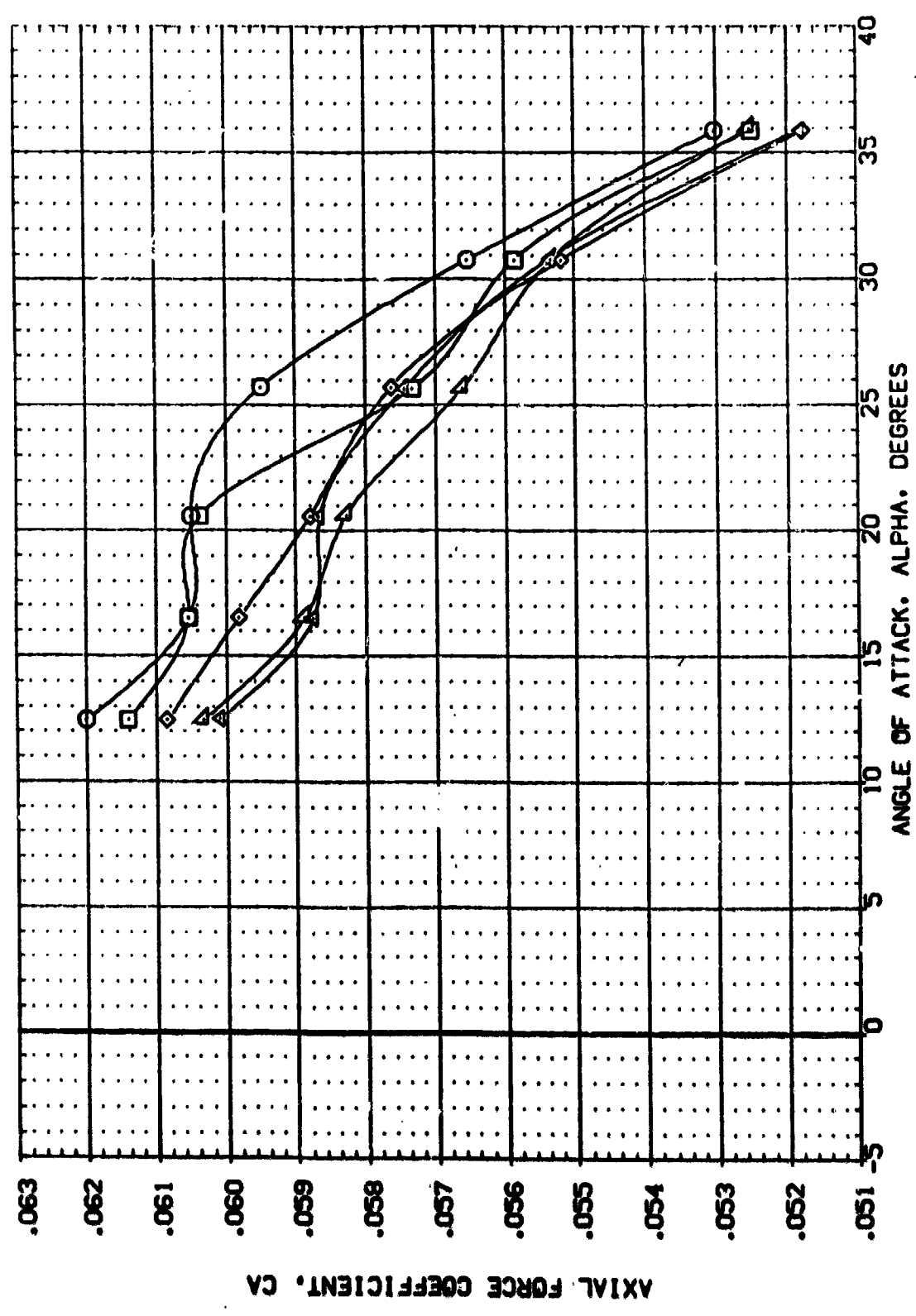
DATA SET SYMB.	CONFIGURATION DESCRIPTION	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CPH021)	MA-7,LPVT 1031,ROCKWELL PRR CR8	.000	.000	1.000	SREF 7245 SQ.FT.
(CPH026)	MA-7,LPVT 1031,ROCKWELL PRR CR8	.000	35.000	1.000	LREF 7.8828 INCHES
(CPH029)	MA-7,LPVT 1031,ROCKWELL PRR CR8	.000	188.000	1.000	BREF 15.1152 INCHES
(CPH030)	MA-7,LPVT 1031,ROCKWELL PRR CR8	.000	310.000	1.000	XREF 12.9510 INCHES
(CPH035)	MA-7,LPVT 1031,ROCKWELL PRR CR8	.000	600.000	1.000	YREF 6.0000 INCHES
					ZREF .0150 INCHES
					SCALE



EFFECT OF YAW NOZZLE PRESSURE

(A) MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVL	REFERENCE INFORMATION
(CPH021)	MA-7-UPVT 1031-ROCKWELL PRR 028	.000	.000	.000	SREF 7245
(CPH026)	MA-7-UPVT 1031-ROCKWELL PRR 028	.000	.000	.000	LREF 7.8828
(CPH029)	MA-7-UPVT 1031-ROCKWELL PRR 028	.000	.000	.000	BREF 15.1152
(CPH030)	MA-7-UPVT 1031-ROCKWELL PRR 028	.000	.000	.000	XPRP 12.5510
(CPH035)	MA-7-UPVT 1031-ROCKWELL PRR 028	.000	.000	.000	YPRP 6.0000
					ZPRP 6.0000
					SCALE .0150

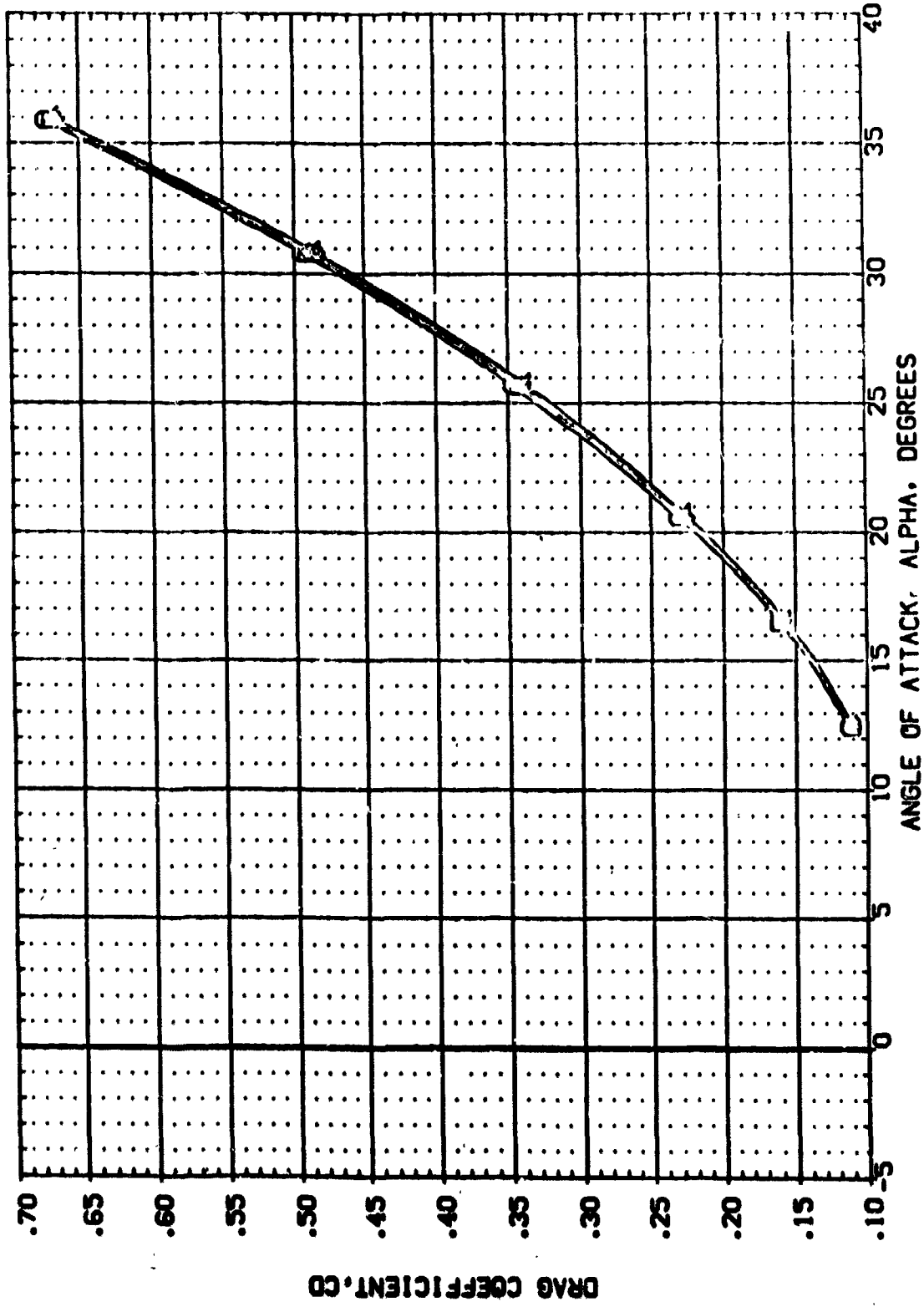


EFFECT OF YAW NOZZLE PRESSURE

(MACH = 4.00)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RVL	REFERENCE INFORMATION
(CP0021)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	.000	1.000	SREF 7245 50. FT.
(CP0025)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	35.000	1.000	LREF 7.6828 INCHES
(CP0028)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	188.000	1.000	BREF 15.1152 INCHES
(CP0030)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	310.000	1.000	XREF 12.9510 INCHES
(CP0035)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	600.000	1.000	YREF 6.0000 INCHES
					ZREF .0150 INCHES
					SCALE

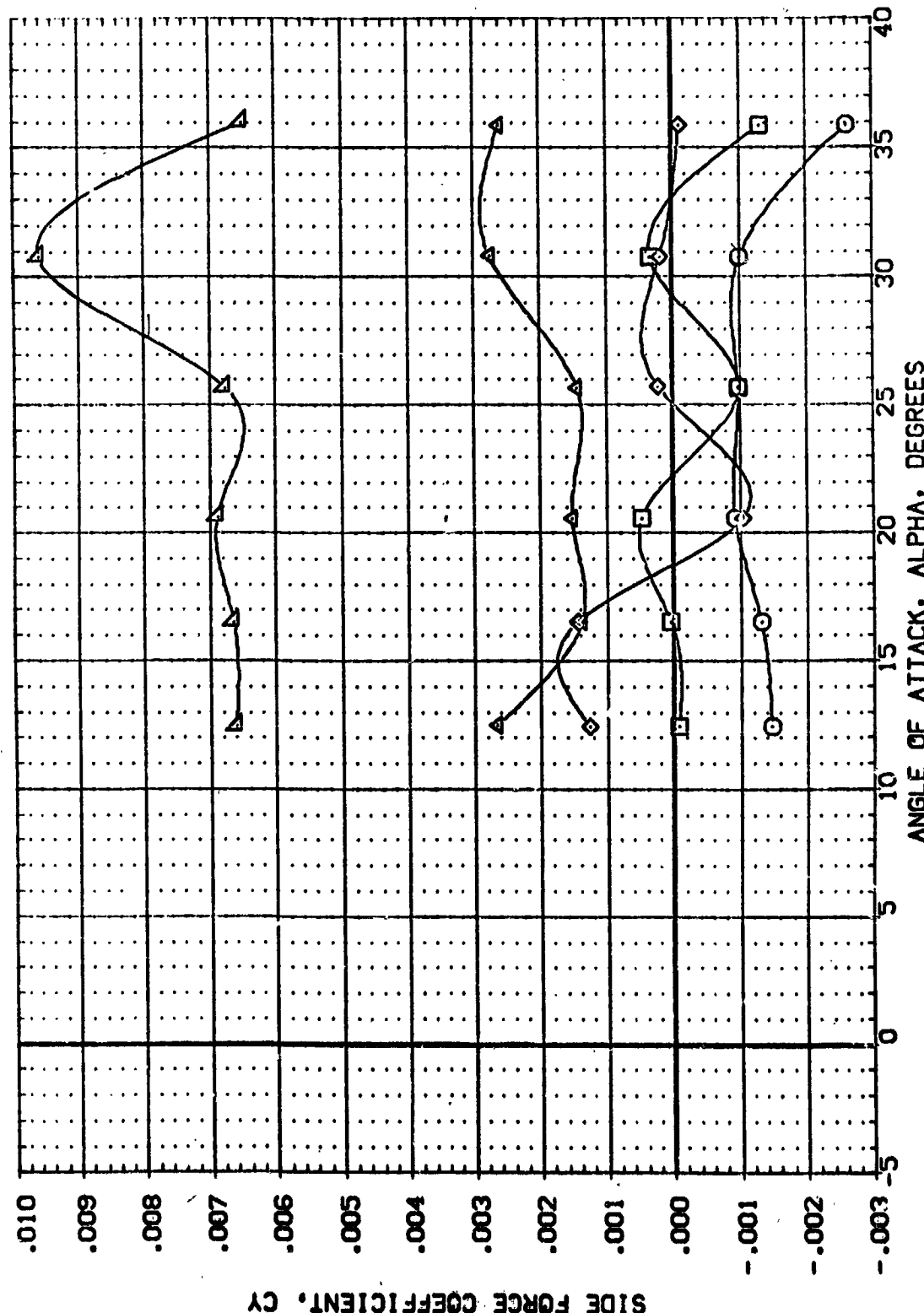


EFFECT OF YAW NOZZLE PRESSURE

(A)MACH = 4.00

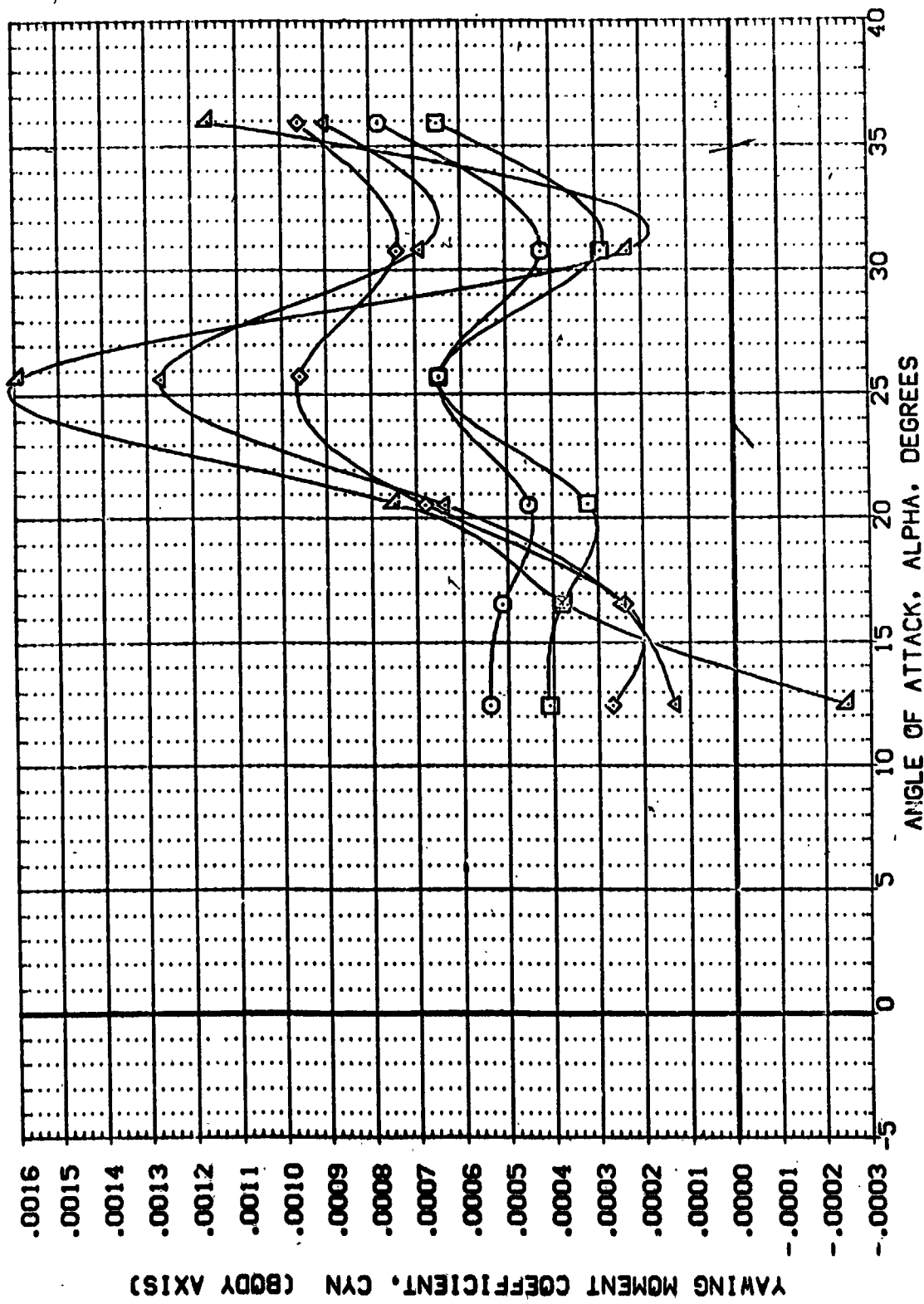


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RNVL	REFERENCE INFORMATION
(CPH021)	MA-7, UPVT 1031, ROCKWELL	.000	.000	1.000	SREF 7245 SQ. FT.
(CPH026)	MA-7, UPVT 1031, ROCKWELL	.000	.35	1.000	LREF 7.8828 INCHES
(CPH029)	MA-7, UPVT 1031, ROCKWELL	.000	188	1.000	BREF 15.1152 INCHES
(CPH030)	MA-7, UPVT 1031, ROCKWELL	.000	310	1.000	XMRP .0000 INCHES
(CPH035)	MA-7, UPVT 1031, ROCKWELL	.000	600	1.000	VMRP .0000 INCHES
					ZMRP .0150 INCHES
					SCALE



EFFECT OF YAW NOZZLE PRESSURE  
(A) MACH = 4.00

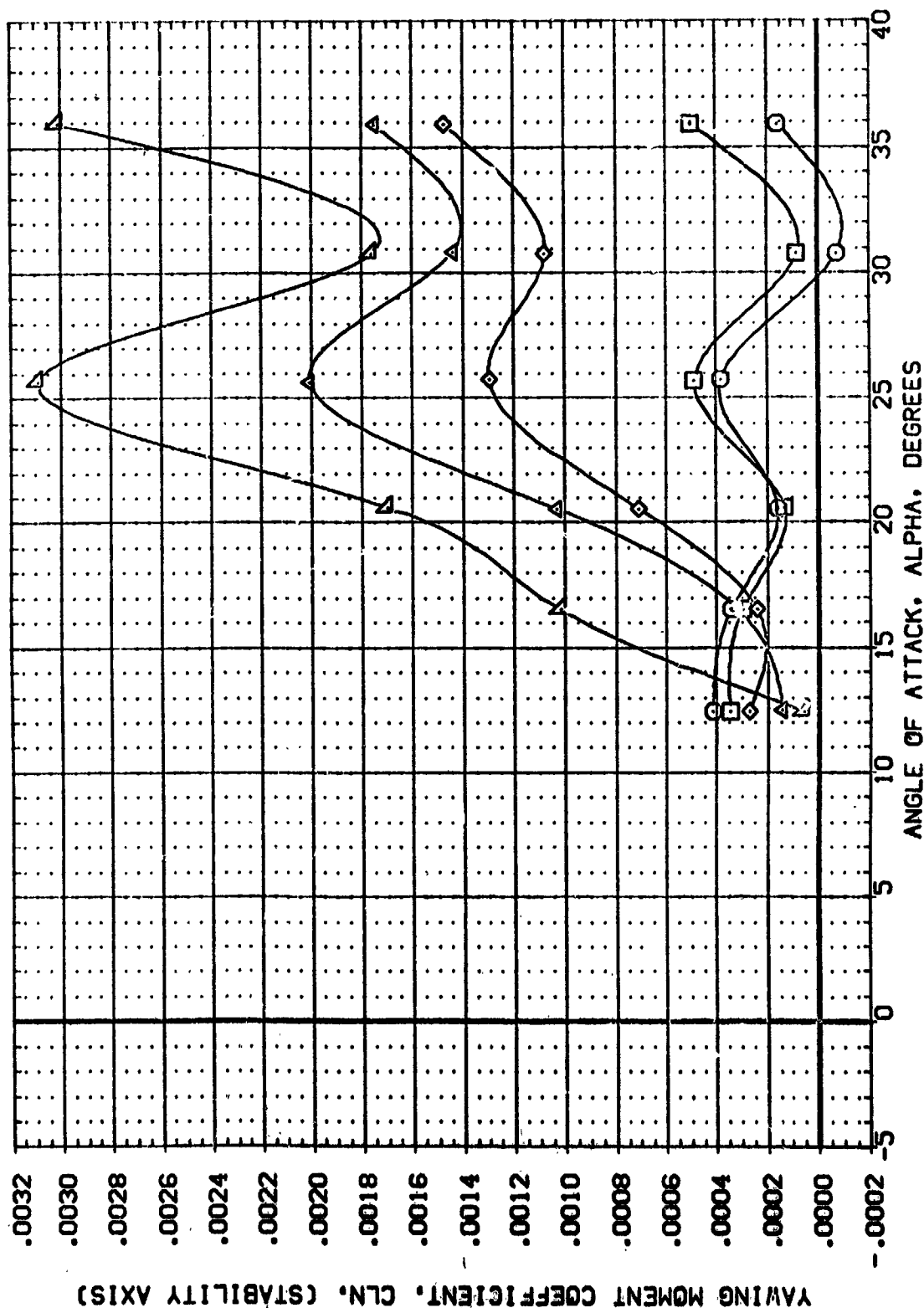
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH021)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BVTHI	.000	.000	1.000	SREF 7.245 SO.FT.
(CPH026)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BVTHI	.000	35.000	1.000	LREF 7.8828 INCHES
(CPH028)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BVTHI	.000	188.000	1.000	BREF 15.1152 INCHES
(CPH030)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BVTHI	.000	310.000	1.000	XREF 12.9510 INCHES
(CPH035)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BVTHI	.000	600.000	1.000	TRP 6.0000 INCHES
					Z-REF 6.0000 INCHES
					SCALE .0150



EFFECT OF YAW NOZZLE PRESSURE

(A) MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RN/L	REFERENCE INFORMATION
(CPM021)	MA-7,UPVT 1031,ROCKWELL PRR CRB: CONF: BVTNI	.000	.000	1.000	SREF 7245 SO.FT.
(CPM026)	MA-7,UPVT 1031,ROCKWELL PRR CRB: CONF: BVTNI	.000	35.000	1.000	LREF 7.8828 INCHES
(CPM029)	MA-7,UPVT 1031,ROCKWELL PRR CRB: CONF: BVTNI	.000	188.000	1.000	BREF 15.1152 INCHES
(CPM030)	MA-7,UPVT 1031,ROCKWELL PRR CRB: CONF: BVTNI	.000	310.000	1.000	XMRP .0000 INCHES
(CPM035)	MA-7,UPVT 1031,ROCKWELL PRR CRB: CONF: BVTNI	.000	600.000	1.000	ZMRP .0000 INCHES
					SCALE .0150

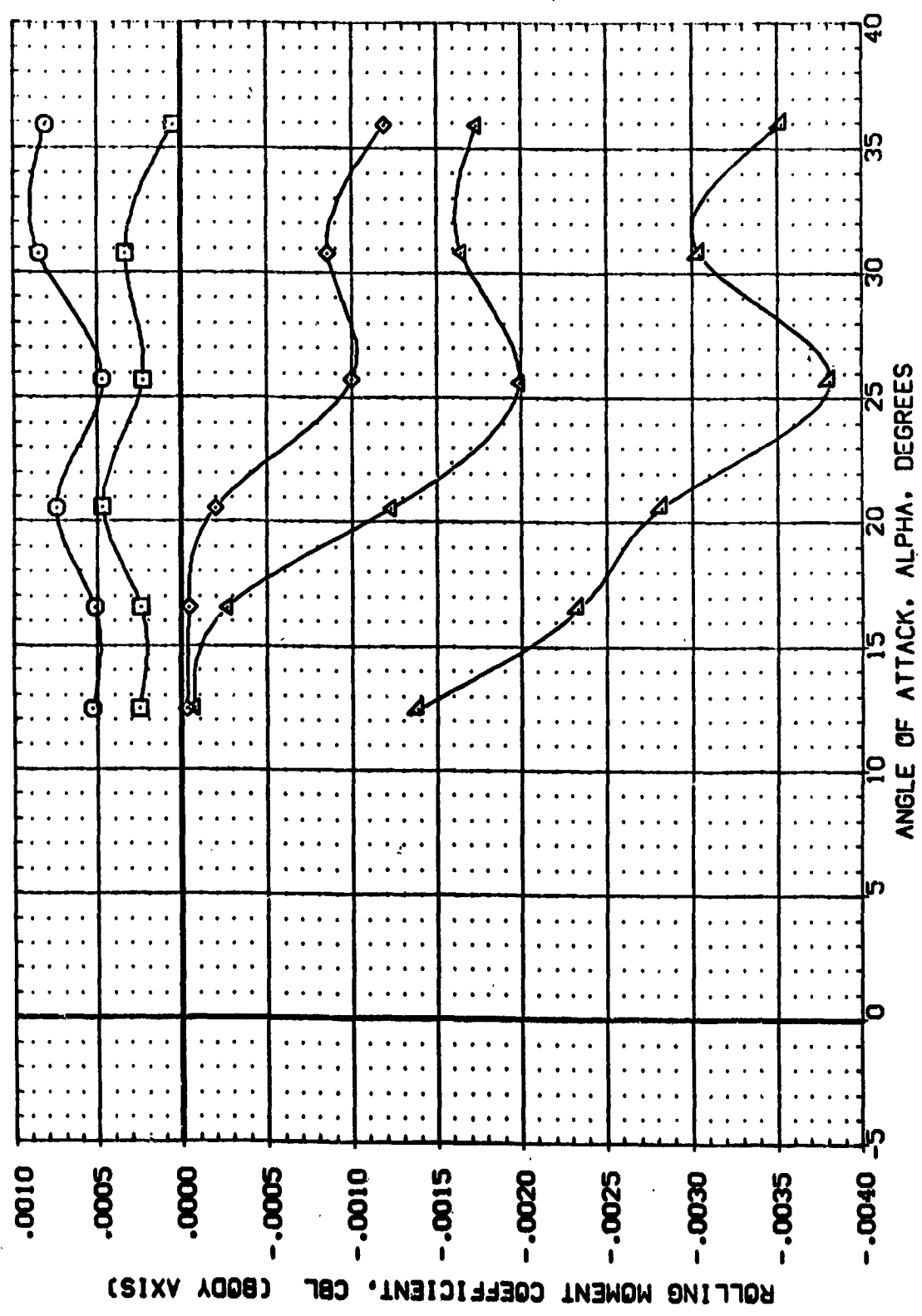


EFFECT OF YAW NOZZLE PRESSURE

(A)MACH = 4.00



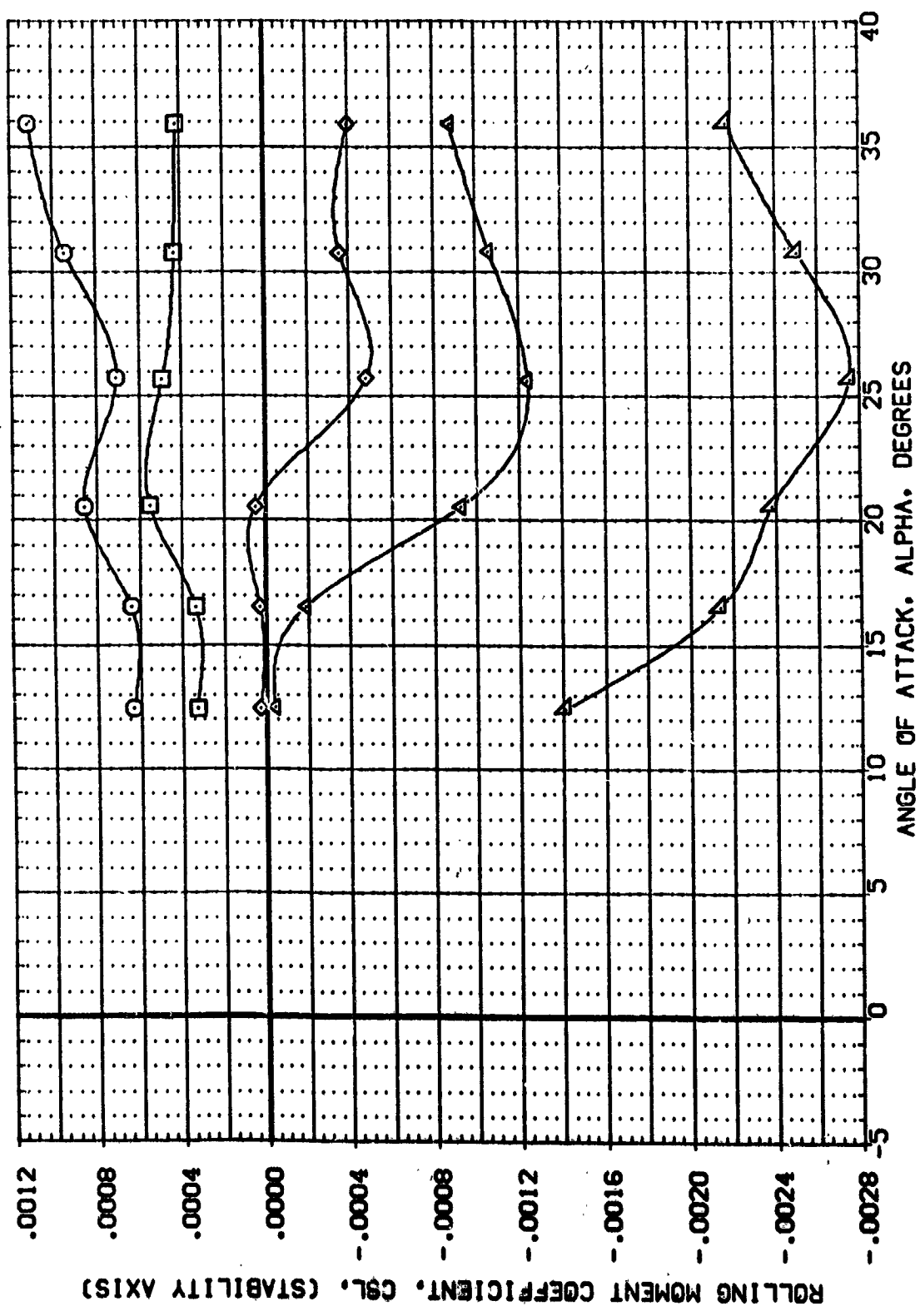
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RVAL	REFERENCE INFORMATION
(CP021)	MA-7, UPVT 1031, ROONVELL PRR CRB, CONF.	.000	.000	1.000	SREF 7245 SC.FT.
(CP026)	MA-7, UPVT 1031, ROONVELL PRR CRB, CONF.	.000	35.000	1.000	LREF 7.8828 INCHES
(CP029)	MA-7, UPVT 1031, ROONVELL PRR CRB, CONF.	.000	188.000	1.000	BREF 15.1152 INCHES
(CP030)	MA-7, UPVT 1031, ROONVELL PRR CRB, CONF.	.000	310.000	1.000	XMRP 12.5510 INCHES
(CP035)	MA-7, UPVT 1031, ROONVELL PRR CRB, CONF.	.000	500.000	1.000	YMRP 6.0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



# EFFECT OF YAW NOZZLE PRESSURE

(A)MACH = 4.00

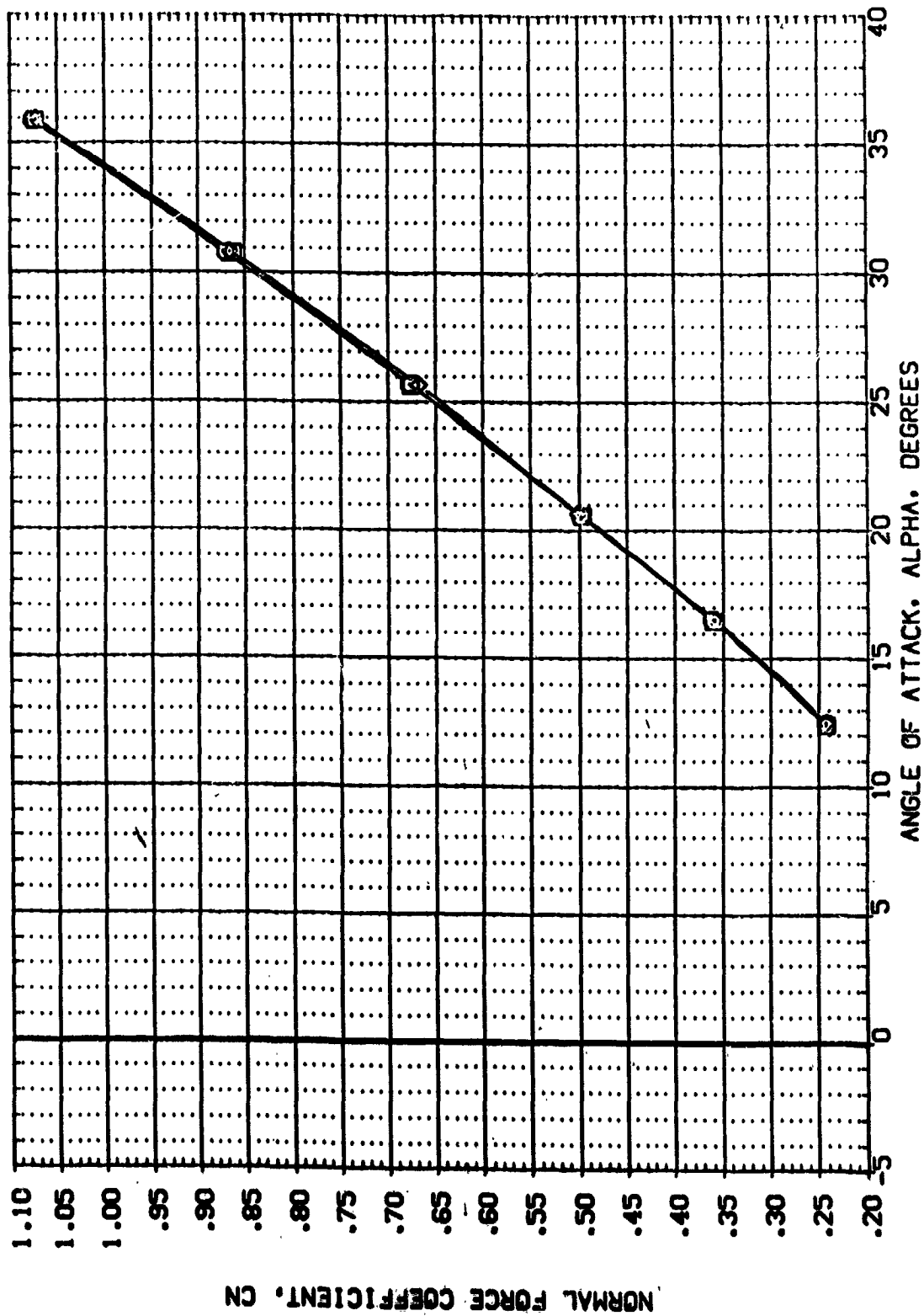
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RV/L	REFERENCE INFORMATION
(CP021)	MA-7, UPVT 1031, ROCKWELL PRR CR8	.000	.000	1.000	SREF 7245 50. FT.
(CP026)	MA-7, UPVT 1031, ROCKWELL PRR CR8	.000	.000	1.000	LREF 7.8828 INCHES
(CP029)	MA-7, UPVT 1031, ROCKWELL PRR CR8	.000	.000	1.000	BREF 15.1152 INCHES
(CP030)	MA-7, UPVT 1031, ROCKWELL PRR CR8	.000	.000	1.000	XMRP 12.9510 INCHES
(CP035)	MA-7, UPVT 1031, ROCKWELL PRR CR8	.000	.000	1.000	YMRP 6.0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



EFFECT OF YAW NOZZLE PRESSURE

(A)MACH = 4.00

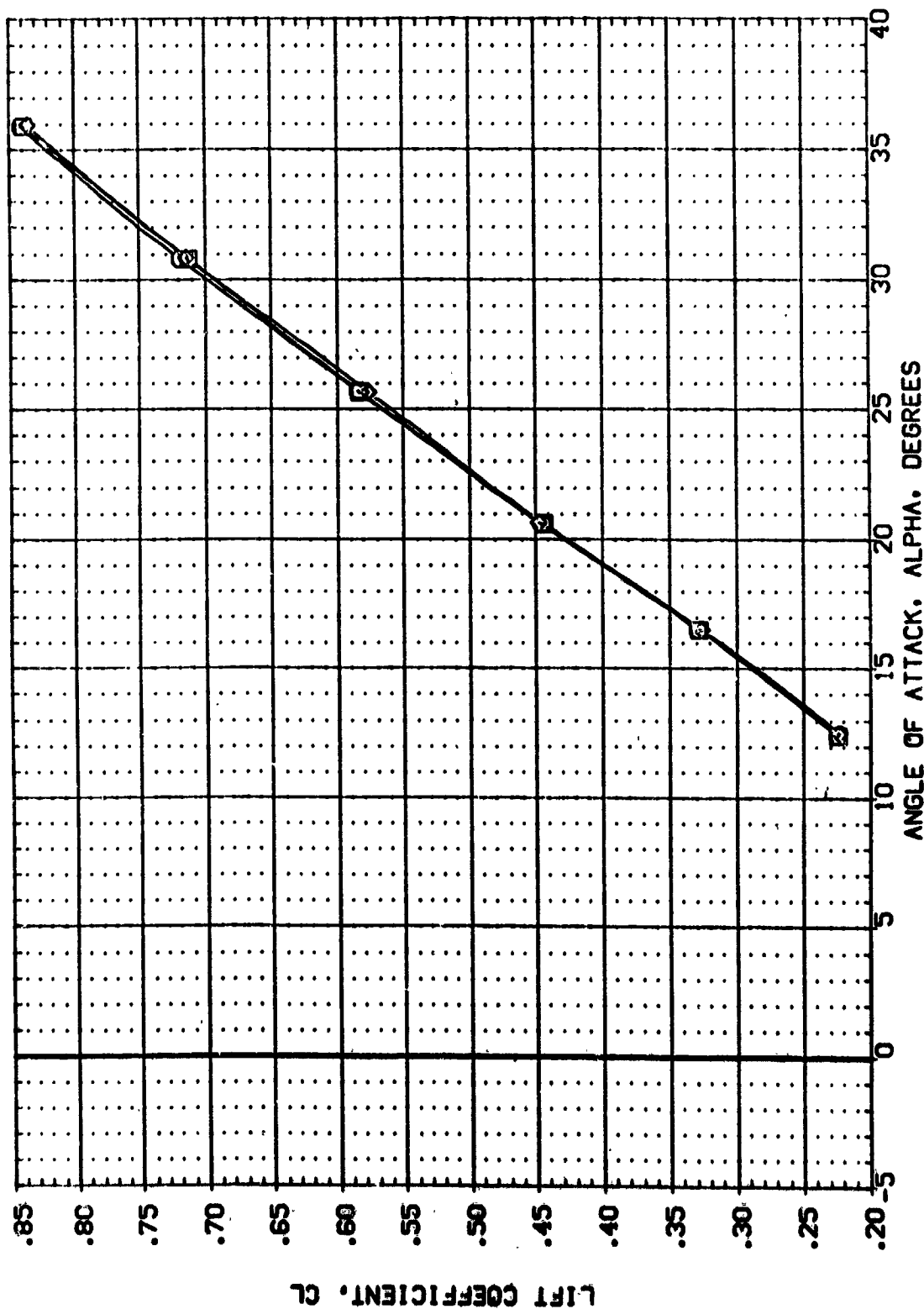
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RV/L	REFERENCE INFORMATION
(CPH021)	HA-7-LPVT 1031, ROCKWELL PRR ORB. CONF. BVTNI	.000	.000	1.000	SREF .7245 SQ. FT.
(CPH022)	HA-7-LPVT 1031, ROCKWELL PRR ORB. CONF. BVTNI	-2.500	.000	1.000	LREF 7.8828 INCHES
(CPH023)	HA-7-LPVT 1031, ROCKWELL PRR ORB. CONF. BVTNI	-5.000	.000	1.000	BREF 15.1152 INCHES
					XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0190



EFFECT OF YAW ANGLE (JET OFF)

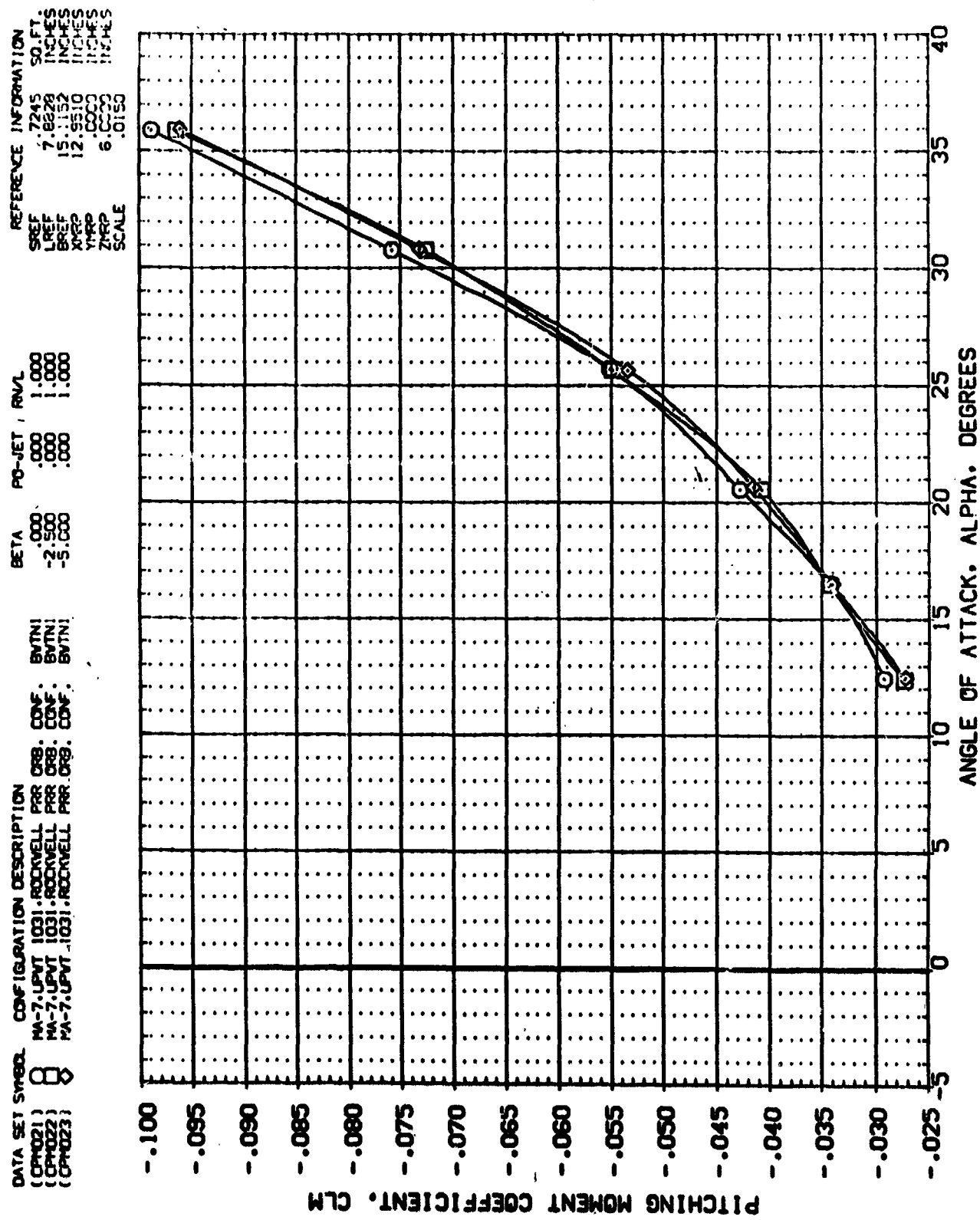
(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CP021)	MA-7.UPT 1031.ROCKWELL PRR CRB. COV.	.000	.000	1.000	SREF 7245 SO.FT.
(CP022)	MA-7.UPT 1031.ROCKWELL PRR CRB. COV.	-2.500	.000	1.000	LREF 7.8828 INCHES
(CP023)	MA-7.UPT 1031.ROCKWELL PRR CRB. COV.	-5.000	.000	1.000	BREF 19.1152 INCHES
					XREF 12.9510 INCHES
					YREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF YAW ANGLE (JET OFF)

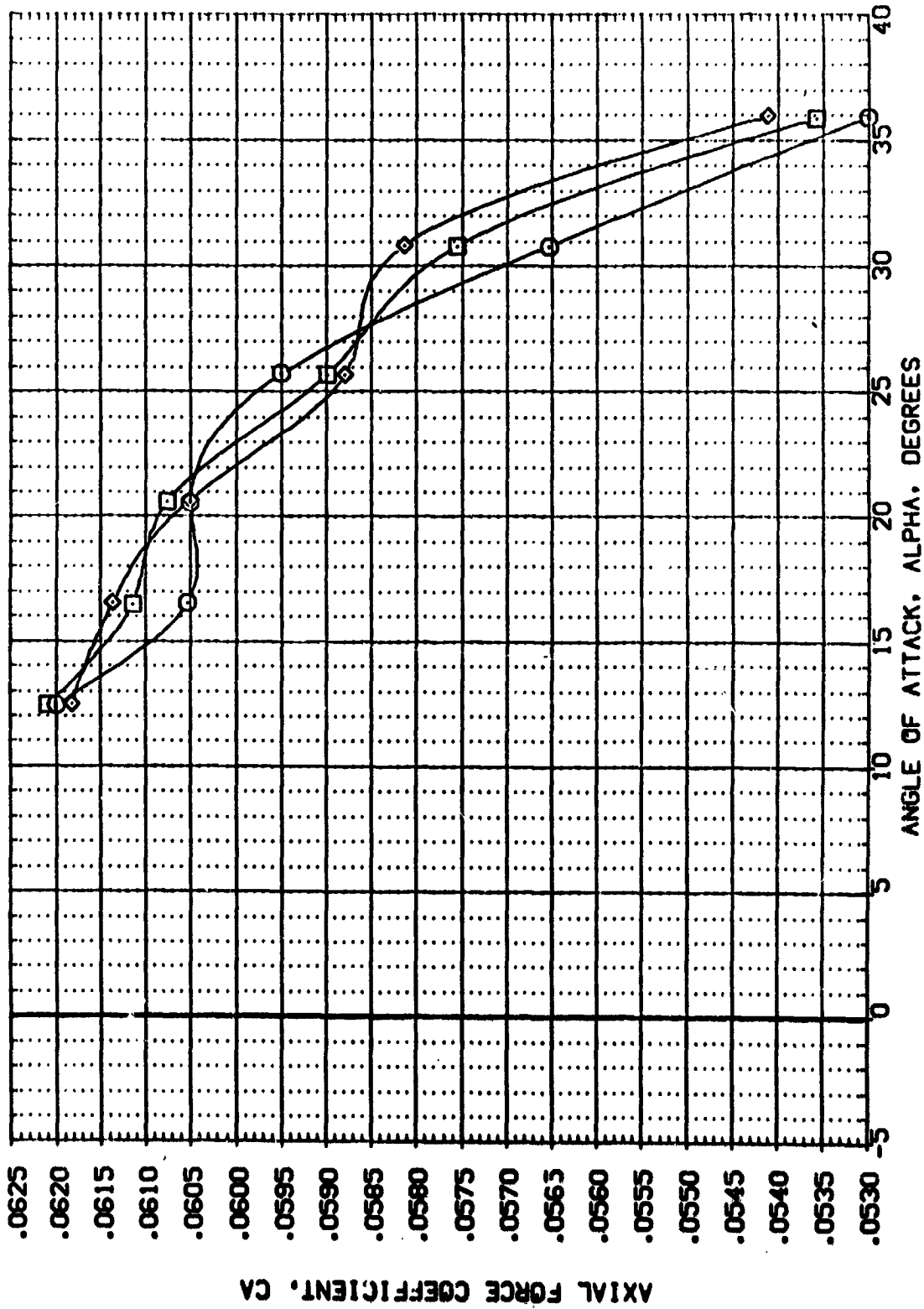
(MACH = 4.00)





DATA SET SYMBOL    CONFIGURATION DESCRIPTION    ORB. CONF.    BATNI    BVTNI    BETA    PG-JET    RV/L    REFERENCE INFORMATION

(CP021)	MA-7, UPVT 1031, ROCKWELL	PRR ORB. CONF.	BATNI	BVTNI	.000	.000	1.000	SREF	7245	50. FT.
(CP022)	MA-7, UPVT 1031, ROCKWELL	PRR ORB. CONF.	BATNI	BVTNI	-2.500	.000	1.000	LREF	7.8828	INCHES
(CP023)	MA-7, UPVT 1031, ROCKWELL	PRR ORB. CONF.	BATNI	BVTNI	-5.000	.000	1.000	BREF	15.1152	INCHES
								YPRP	12.9510	INCHES
								ZPRP	6.0000	INCHES
								SCALE	0.050	INCHES

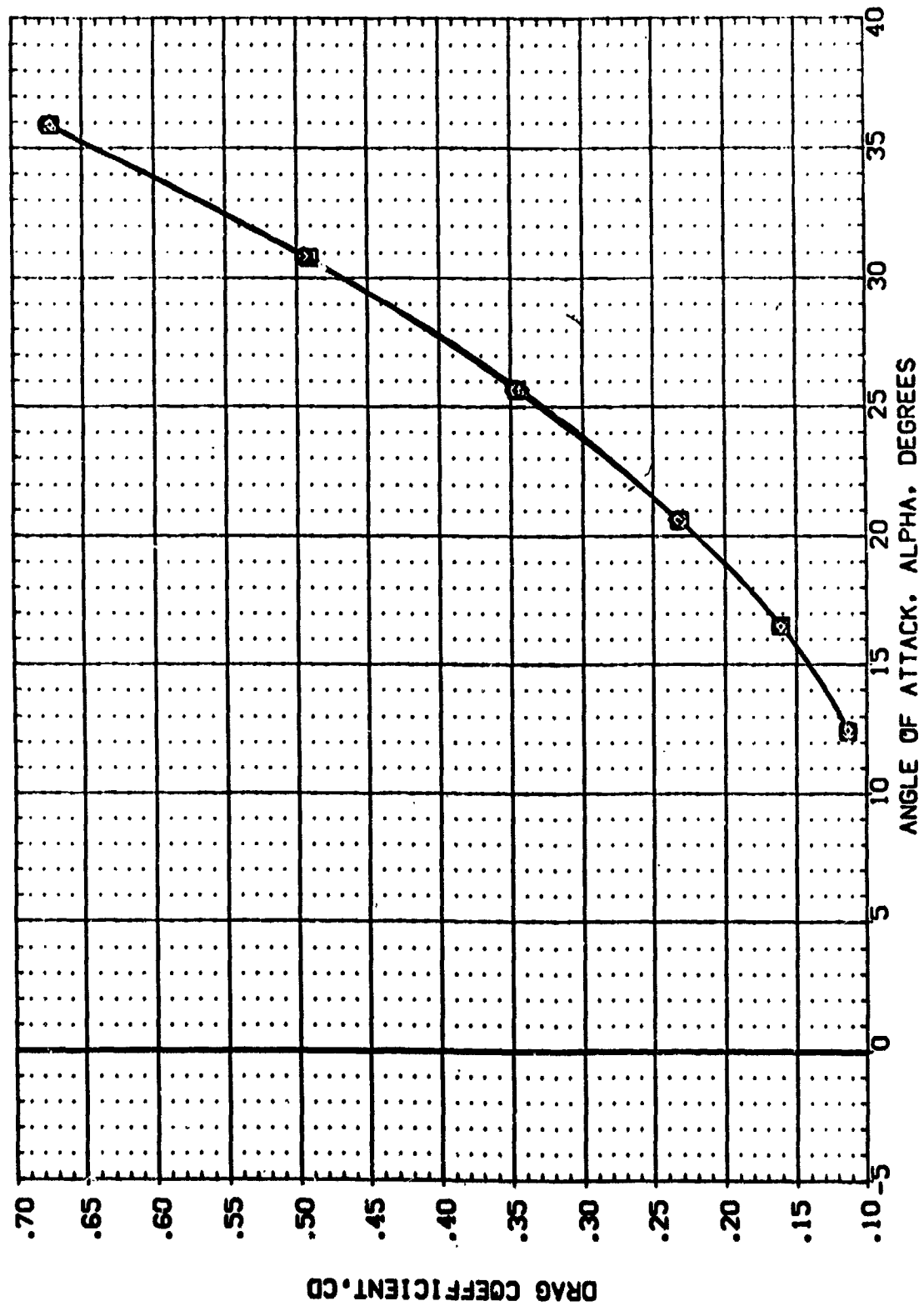


EFFECT OF YAW ANGLE (JET OFF)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVL	REFERENCE INFORMATION
(CPM021)	MA-7A.PVT 1031: ROCKWELL PPR DBB: CONF: BV(TN)	.000	.000	1.000	SREF 7.245 SQ.FT.
(CPM022)	MA-7A.PVT 1031: ROCKWELL PPR DBB: CONF: BV(TN)	-2.500	.000	1.000	LREF 7.8828 INCHES
(CPM023)	MA-7A.PVT 1031: ROCKWELL PPR DBB: CONF: BV(TN)	-5.000	.000	1.000	SREF 15.1152 INCHES
					XREF 12.9510 INCHES
					YREF 6.0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF YAW ANGLE (JET OFF)

(A)MACH = 4.00

REFERENCE INFORMATION  
 SREF 7.245 SQ.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1132 INCHES  
 YPRP 12.9510 INCHES  
 ZPRP 6.0000 INCHES  
 SCALE .0150

BETA PO-JET RV/L  
 .000 1.000  
 -2.500 1.000  
 -5.000 1.000

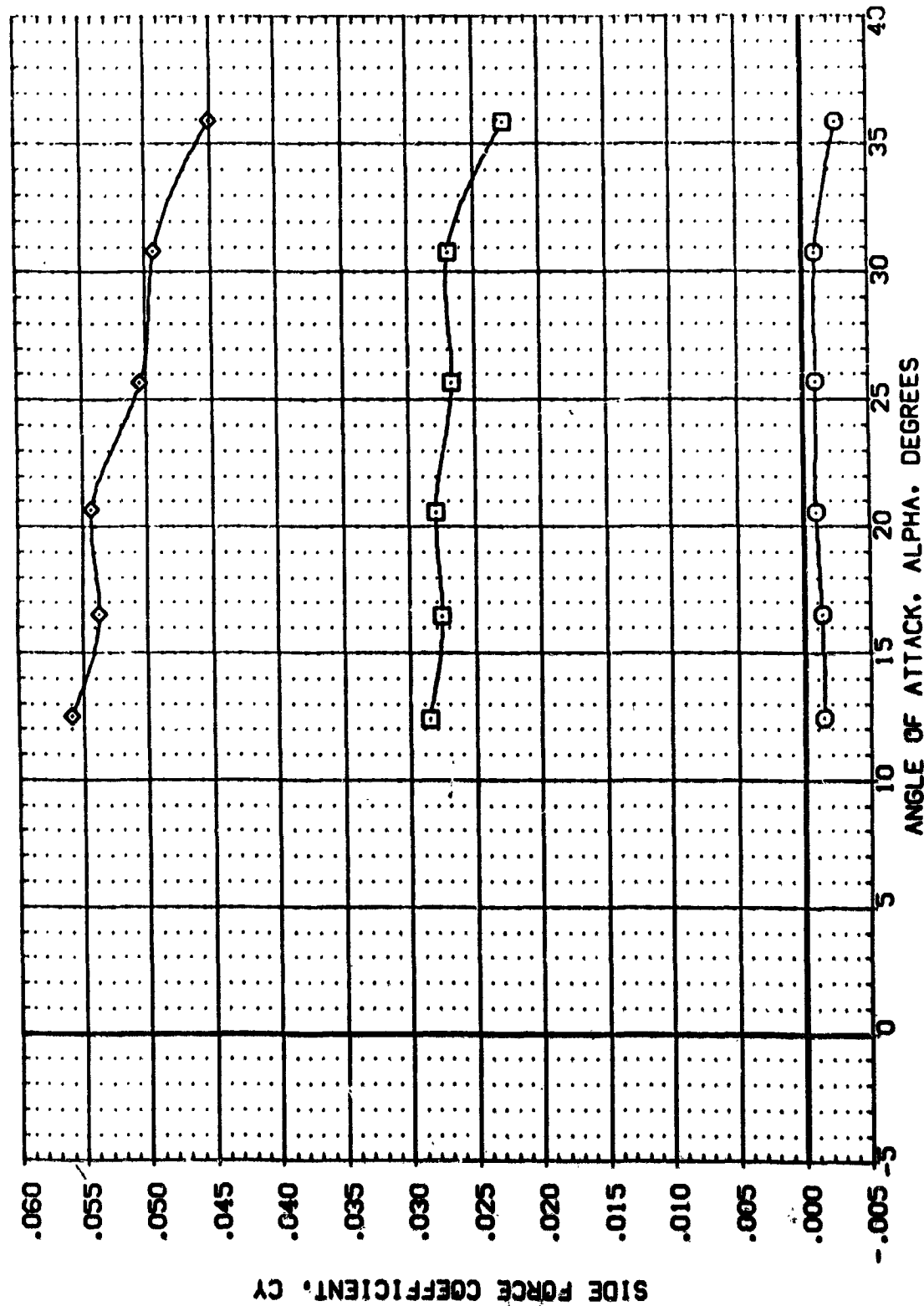
BVTNI  
 BVTNI  
 BVTNI

CONF  
 CONF  
 CONF

PRR  
 PRR  
 PRR

MA-7,UPVT 1031,ROCKWELL  
 MA-7,UPVT 1031,ROCKWELL  
 MA-7,UPVT 1031,ROCKWELL

DATA SET SYMBOL  
 (CPH021)  
 (CPH022)  
 (CPH023)



EFFECT OF YAW ANGLE (JET OFF)

(A)MACH = 4.00

DATA SET SYMBOL: (CPH021) (CPH022) (CPH023)

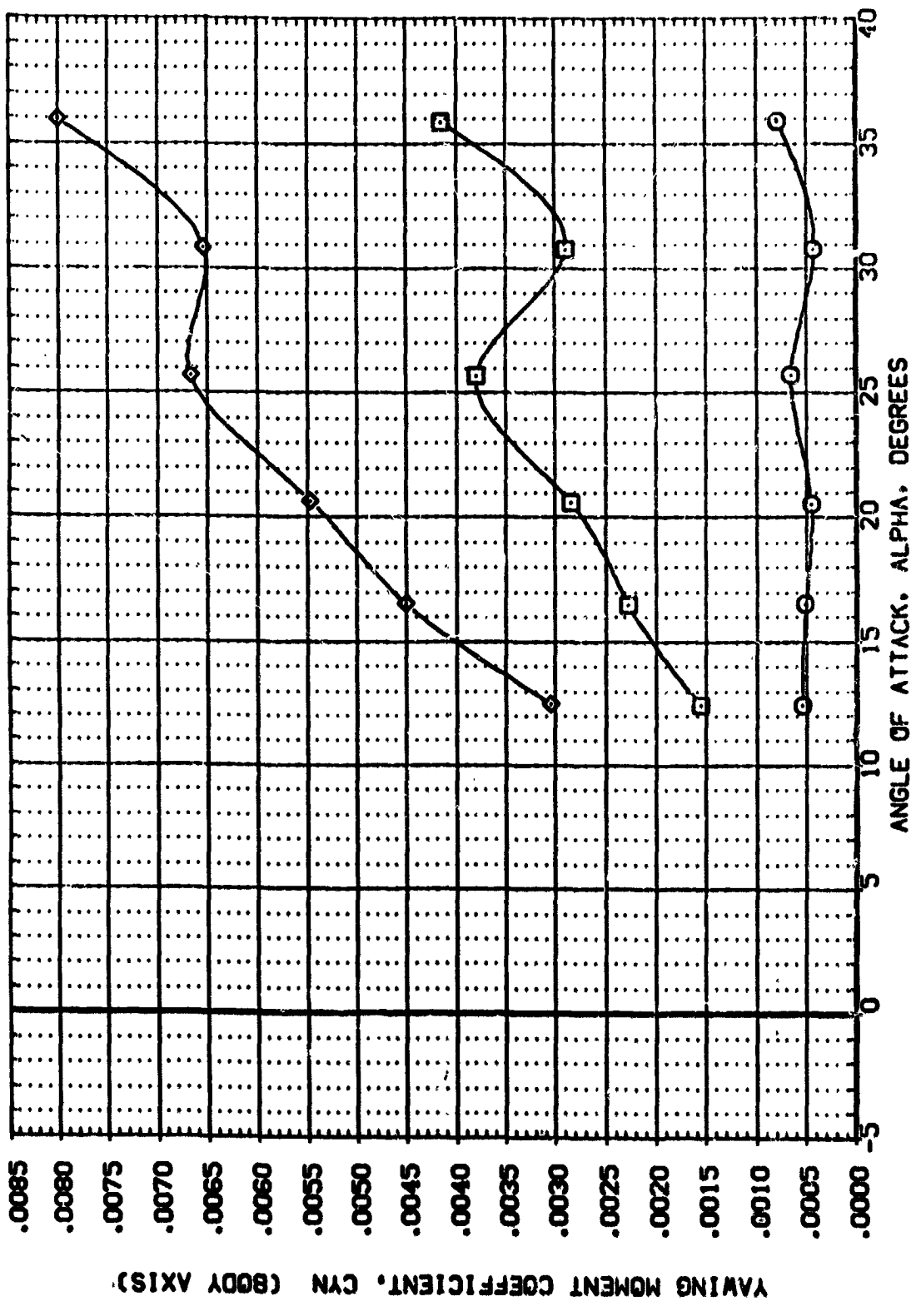
CONFIGURATION DESCRIPTION: MA-7-UPVT 1031, ROCKWELL MA-7-UPVT 1031, ROCKWELL MA-7-UPVT 1031, ROCKWELL

BETA: .000 -2.500 -5.000

PO-JET: .000 .000 .000

RM/L: 1.000 1.000 1.000

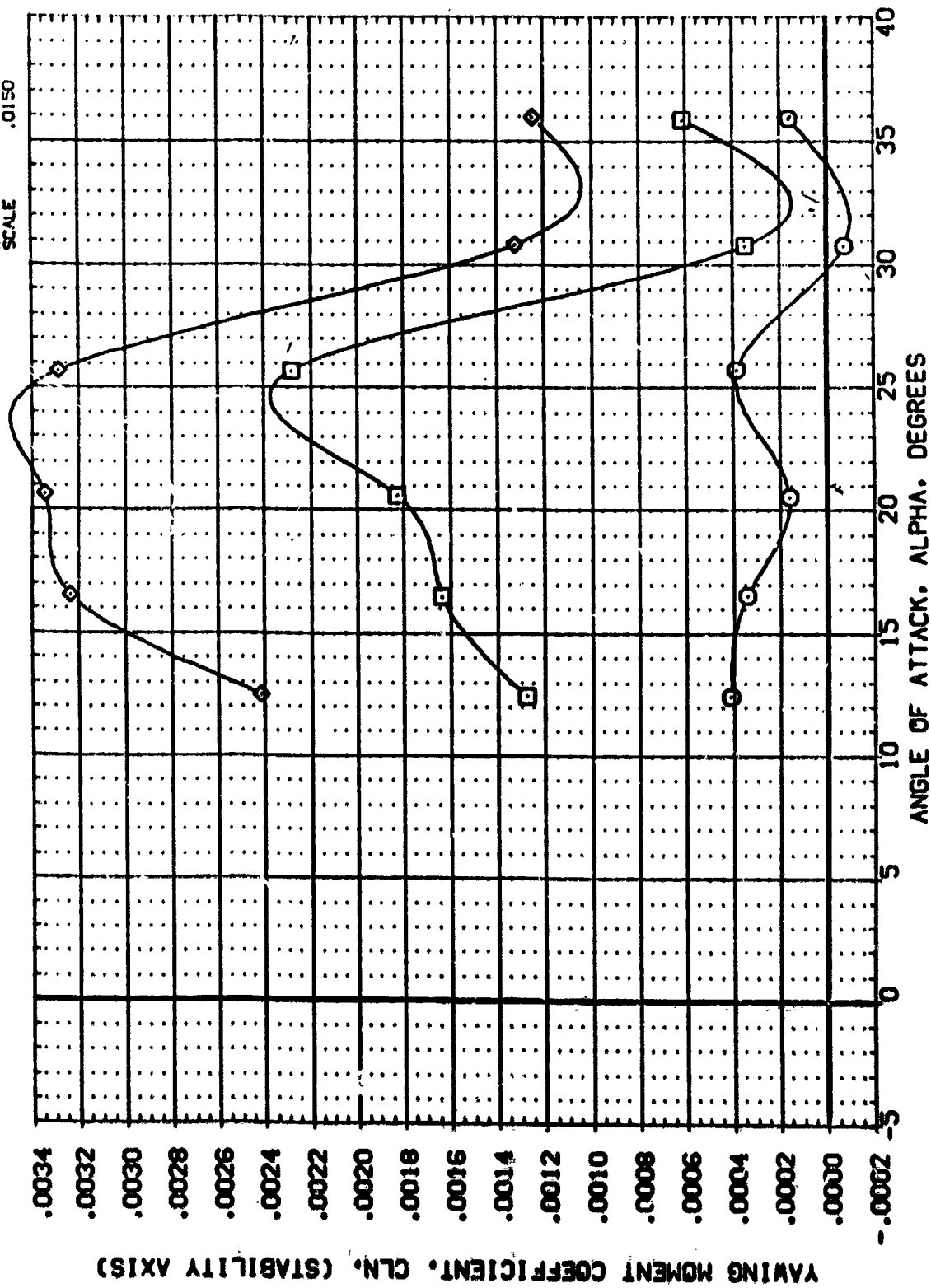
REFERENCE INFORMATION: SREF: 7245 SQ.FT. LREF: 7.8628 INCHES BREF: 15.1152 INCHES XREF: 12.9510 INCHES YREF: .0000 INCHES ZREF: 6.0000 INCHES SCALE: .0150



EFFECT OF YAW ANGLE (JET OFF)

(A)MACH = 4.00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA		PO-JET		RV/L		REFERENCE INFORMATION		
(CPH021)	MA-7-UPVT	IQ31-ROCKWELL	PRR	ORB	CONF	BVTNI	ORB	CONF	BVTNI	SREF	7245	SO.FT.
(CPH022)	MA-7-UPVT	IQ31-ROCKWELL	PRR	ORB	CONF	BVTNI	ORB	CONF	BVTNI	LREF	7.8628	INCHES
(CPH023)	MA-7-UPVT	IQ31-ROCKWELL	PRR	ORB	CONF	BVTNI	ORB	CONF	BVTNI	BREF	15.1152	INCHES
										XPRP	12.9510	INCHES
										YPRP	6.0000	INCHES
										ZPRP	6.0000	INCHES
										SCALE	.0150	



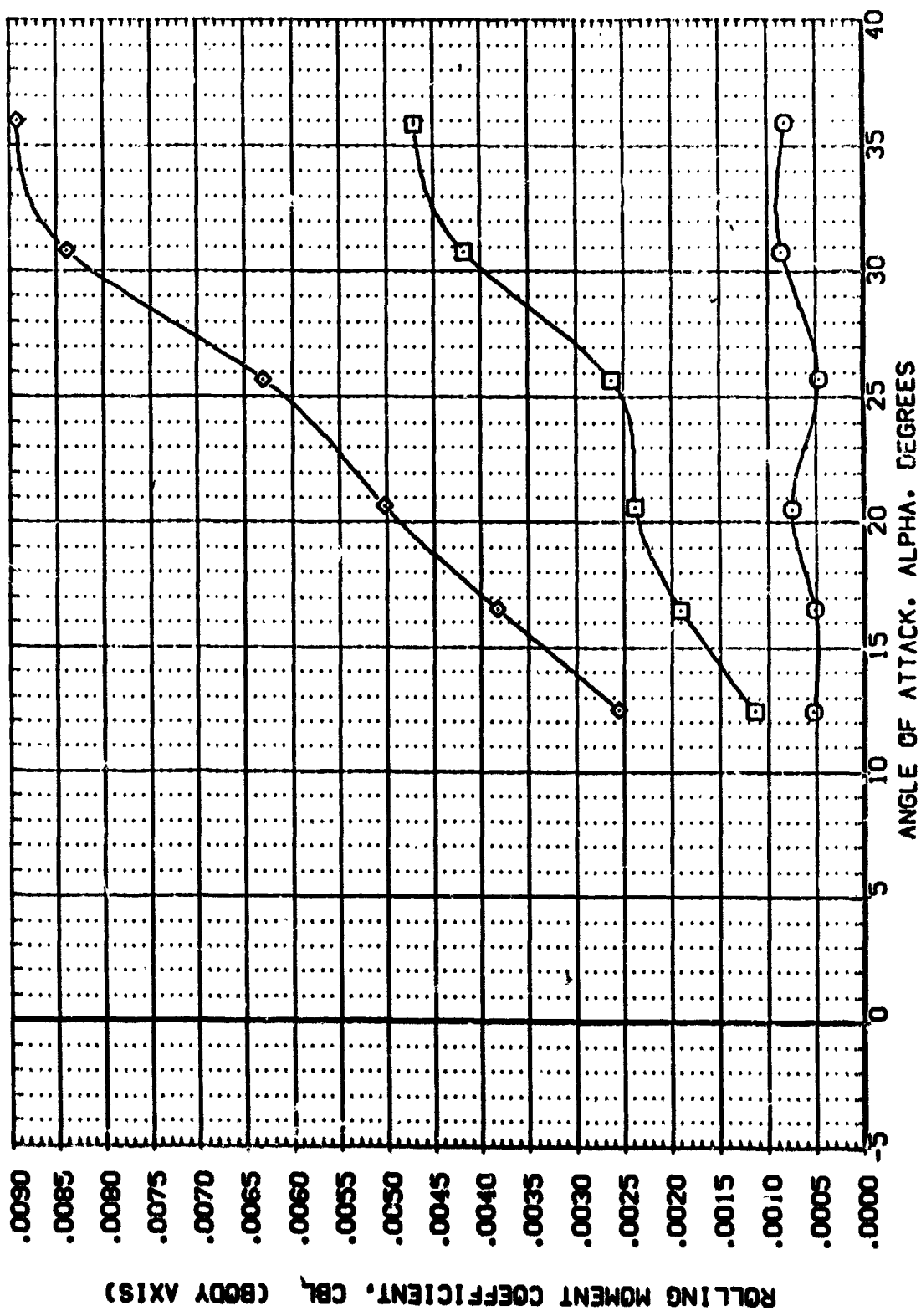
EFFECT OF YAW ANGLE (JET OFF)

(A)MACH = 4.00



DATA SET SYMBOL CONFIGURATION DESCRIPTION

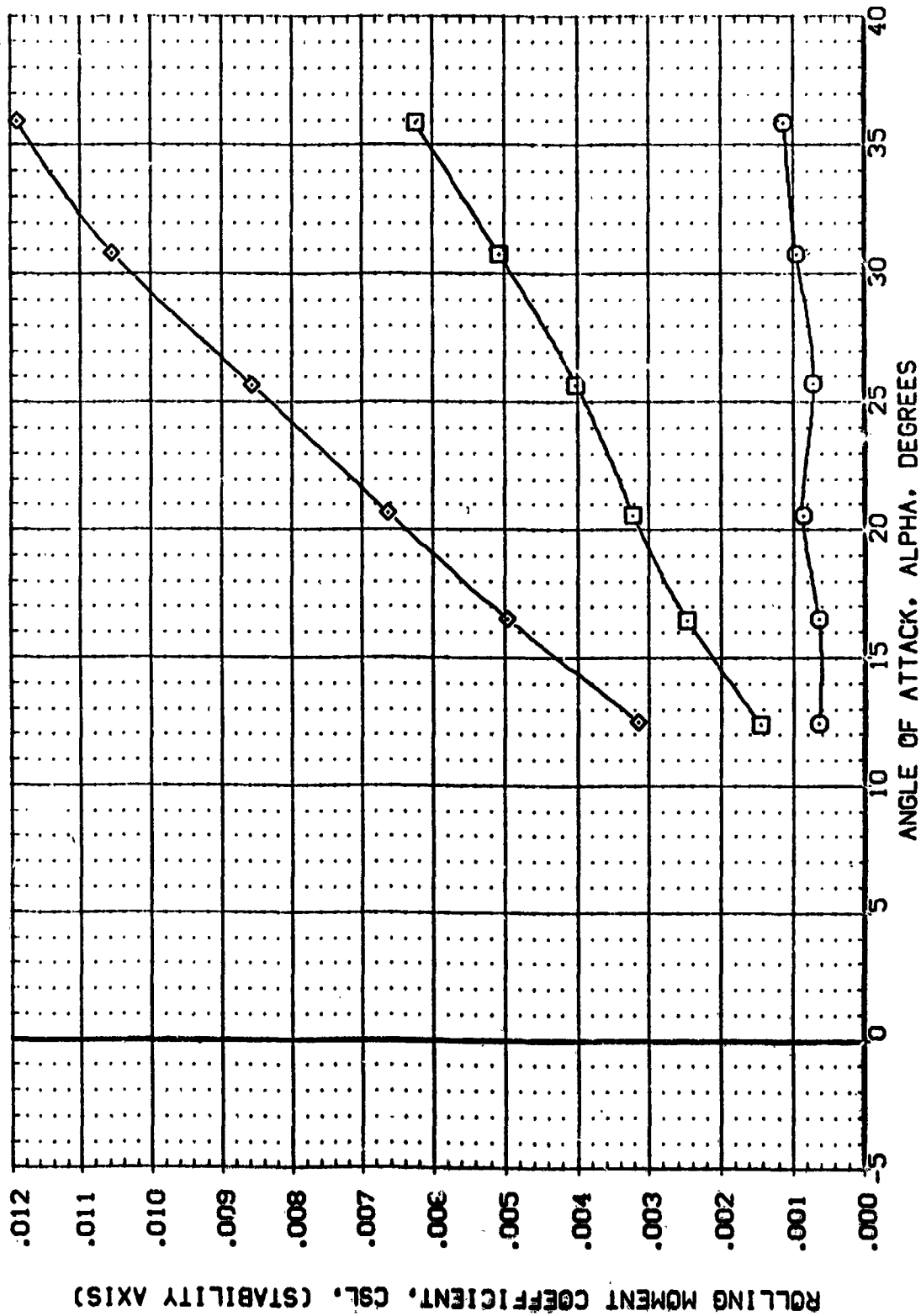
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PC-JET	INVL	REFERENCE INFORMATION
(OP021)	MA-7,UPVT 1031,ROOVELL PRR DBB, CNF: BVTN1	.000	.000	1.000	SREF 7245 SC.FT.
(OP022)	MA-7,UPVT 1031,ROOVELL PRR DBB, CNF: BVTN1	-2.500	.000	1.000	LREF 7.6528 INCHES
(OP023)	MA-7,UPVT 1031,ROOVELL PRR DBB, CNF: BVTN1	-5.000	.000	1.000	BREF 15.1152 INCHES
					XPRP 12.6200 INCHES
					YPRP 6.0000 INCHES
					ZPRP 6.0000 INCHES
					SCALE 6.0000



EFFECT OF YAW ANGLE (JET OFF)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RN/L	REFERENCE INFORMATION
(CPH021)	MA-7-LPVT 1031 ROCKWELL PRR CRB. CONF.	.000	.000	1.000	SREF 7.245 SQ.FT.
(CPH022)	MA-7-LPVT 1031 ROCKWELL PRR CRB. CONF.	-2.500	.000	1.000	LREF 7.8828 INCHES
(CPH023)	MA-7-LPVT 1031 ROCKWELL PRR CRB. CONF.	-5.000	.000	1.000	BREF 15.1152 INCHES
					XPRP 12.9510 INCHES
					YPRP .0000 INCHES
					ZPRP .0000 INCHES
					SCALE .0150

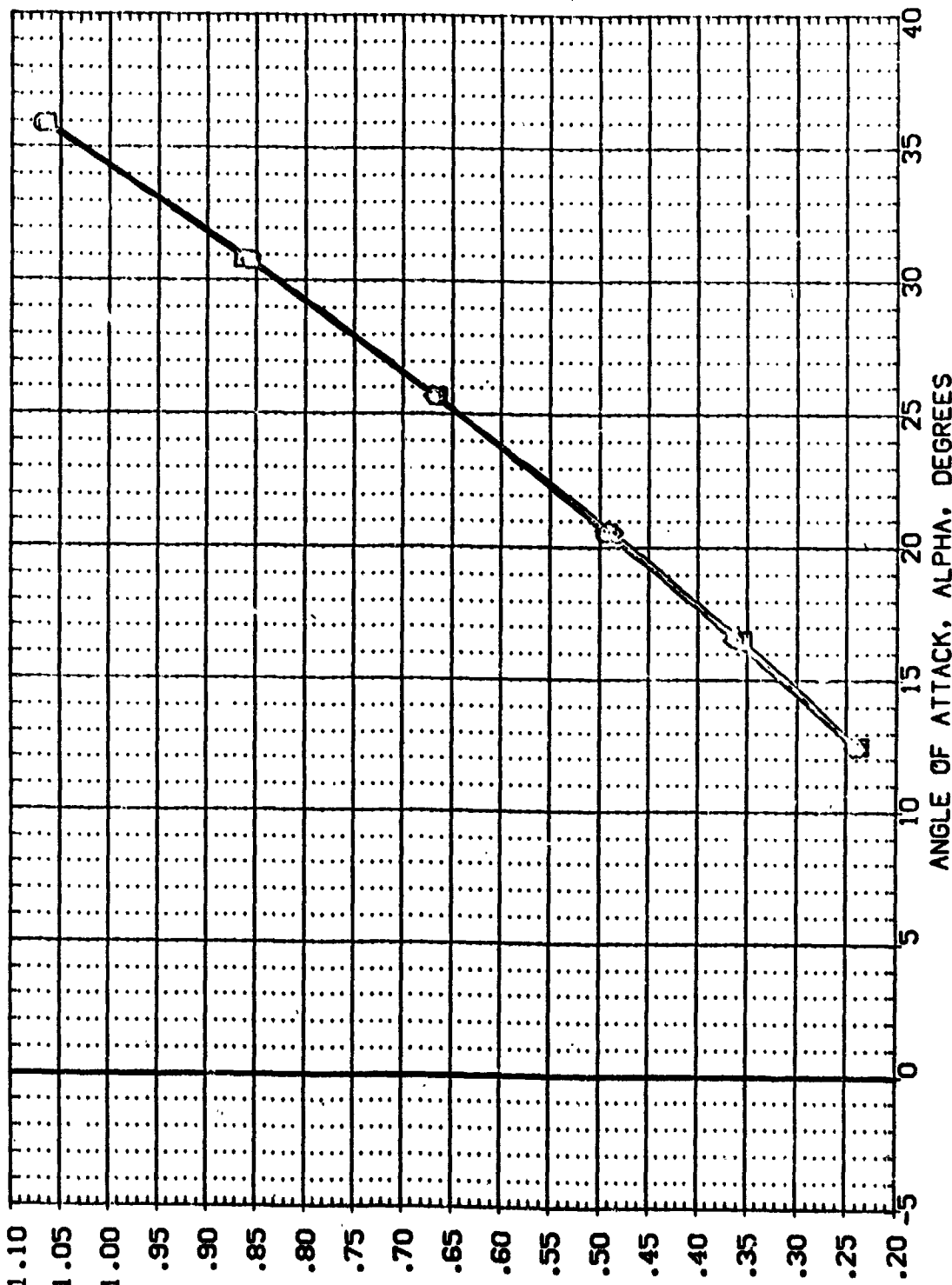


EFFECT OF YAW ANGLE (JET OFF)

(A)MACH = 4.00

NORMAL FORCE COEFFICIENT, CN

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CP-031)	MA-7-UPVT 1031-ROCKWELL PPR DRB. COVF.	5.000	310.000	1.000	SREF 7245 SQ.FT.
(CP-030)	MA-7-UPVT 1031-ROCKWELL PPR DRB. COVF.	.000	310.000	1.000	LREF 7.6828 INCHES
(CP-032)	MA-7-UPVT 1031-ROCKWELL PPR DRB. COVF.	-2.500	310.000	1.000	BREF 15.1152 INCHES
(CP-033)	MA-7-UPVT 1031-ROCKWELL PPR DRB. COVF.	-5.000	310.000	1.000	XREF 12.5510 INCHES
					WREF 6.0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150

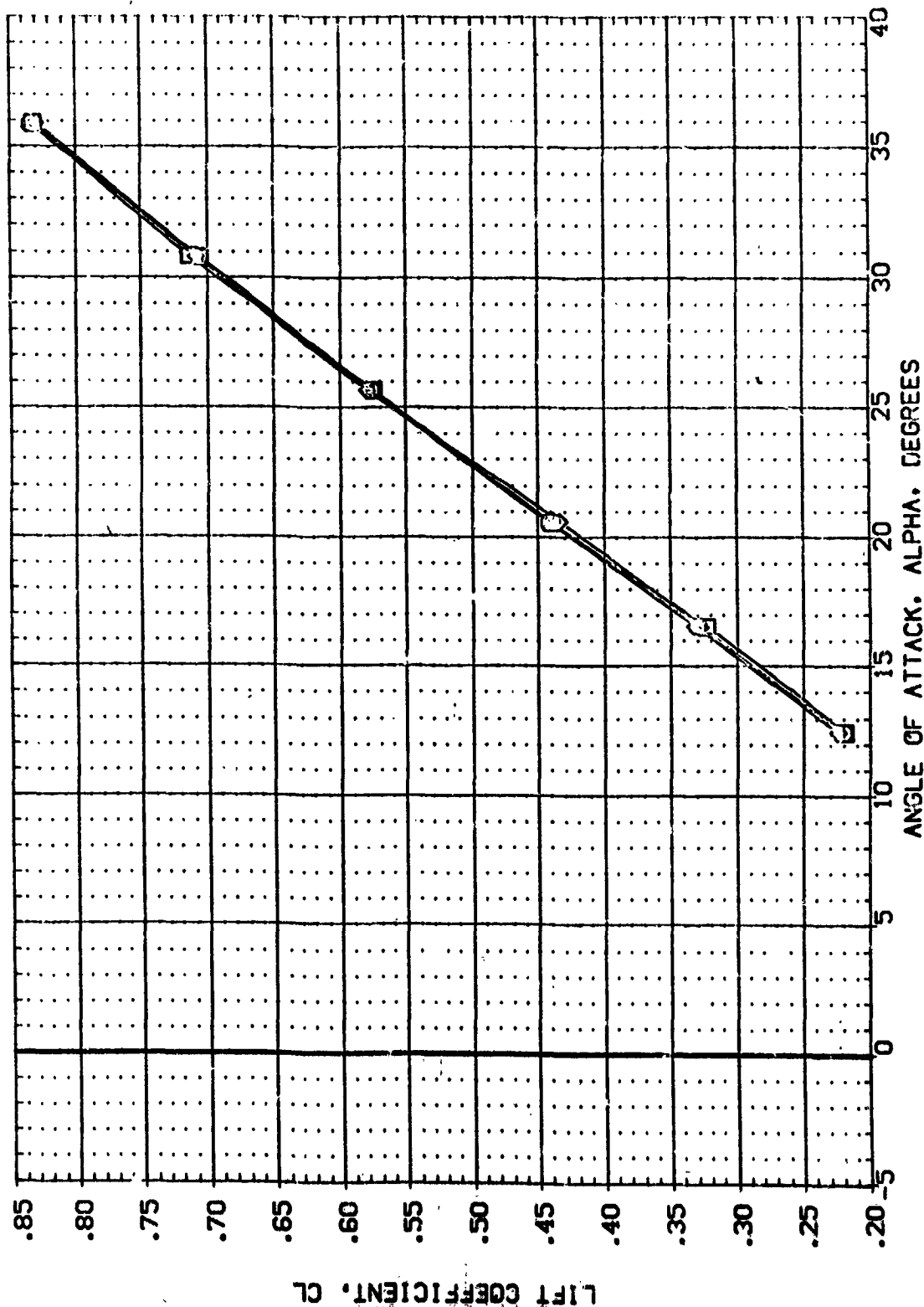


EFFECT OF YAW ANGLE (JET ON)

(A)MACH = 4.00



DATA SET SYMBOL	CONF:GURATION DESCRIPTION	PRR	ORB	CONF	BVTNI	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CPM031)	MA-7-UPVT 1031-ROCKWELL	PRR	ORB	CONF	BVTNI	5.000	310.000	1.000	SREF 7245
(CPM032)	MA-7-UPVT 1031-ROCKWELL	PRR	ORB	CONF	BVTNI	0.000	310.000	1.000	LREF 7.6828
(CPM033)	MA-7-UPVT 1031-ROCKWELL	PRR	ORB	CONF	BVTNI	-2.500	310.000	1.000	BREF 15.1152
						-5.000	310.000	1.000	YREF 12.9510
									ZREF 6.0000
									SCALE .0150

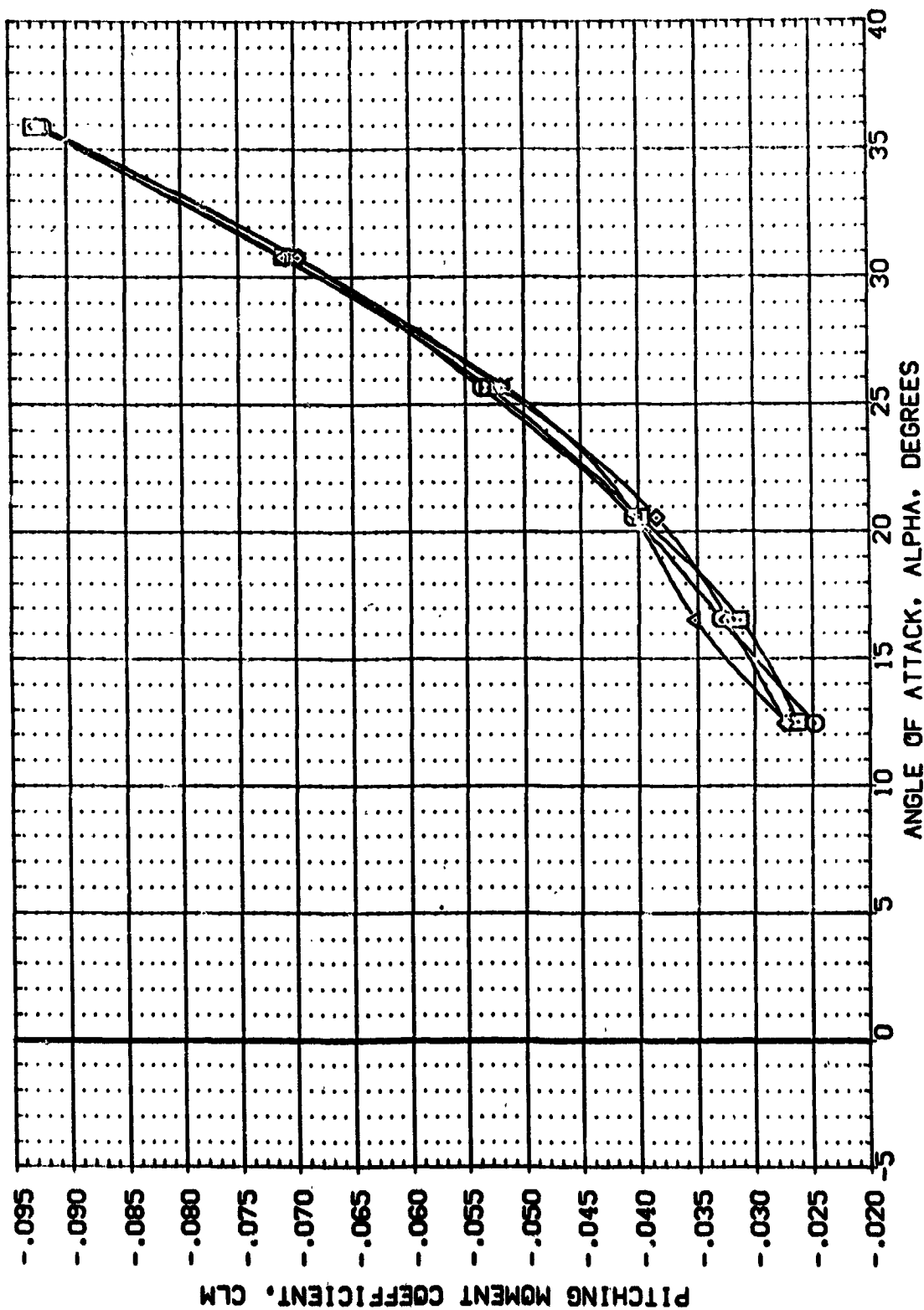


EFFECT OF YAW ANGLE (JET ON)

(M)MACH = 4.00



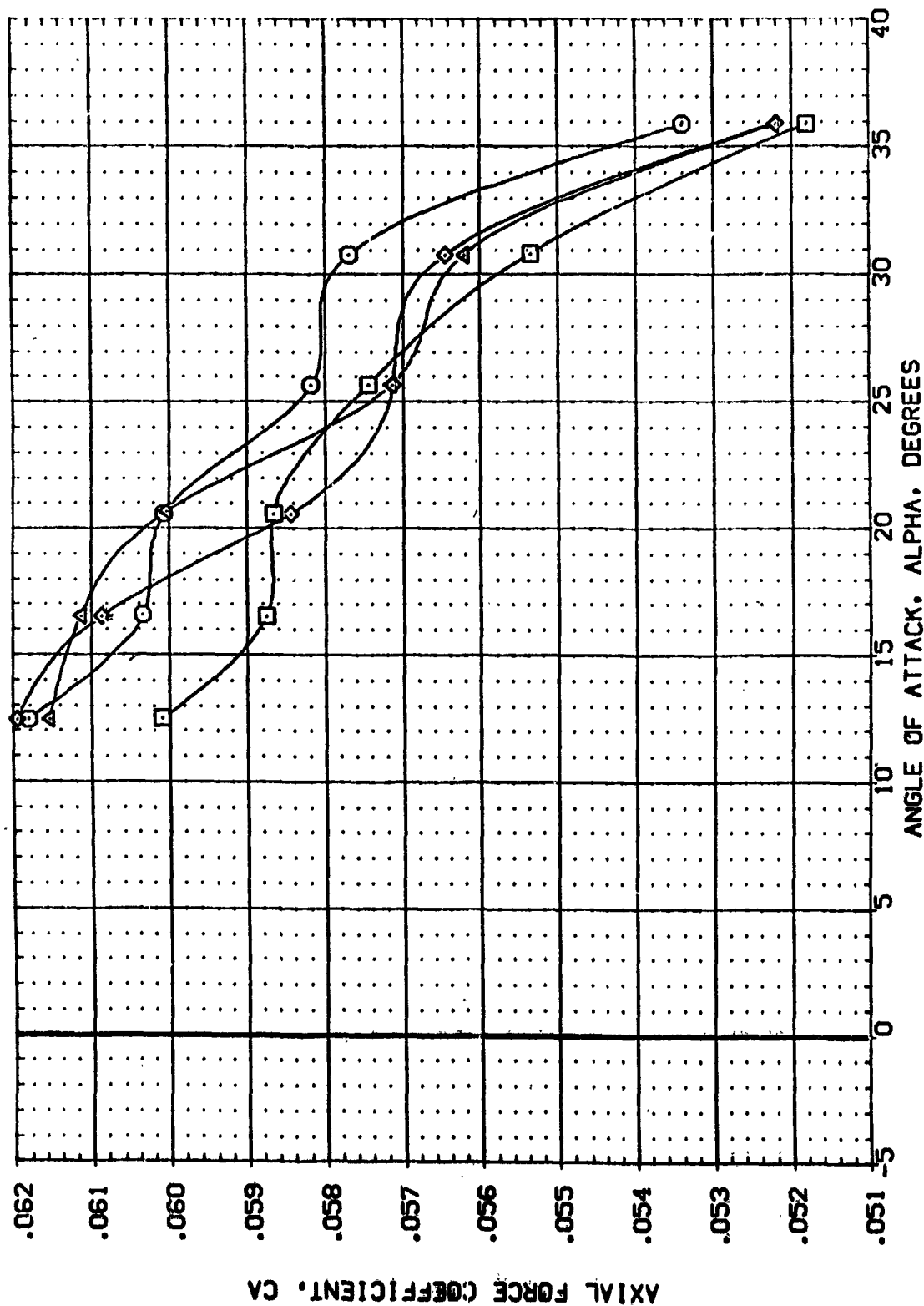
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVL	REFERENCE INFORMATION
(CPH031)	MA-7, UPVT 1031, ROCKWELL	5.000	310.000	1.000	SREF 7245 50. FT.
(CPH032)	MA-7, UPVT 1031, ROCKWELL	5.000	310.000	1.000	LREF 7.8828 INCHES
(CPH033)	MA-7, UPVT 1031, ROCKWELL	-2.500	310.000	1.000	BREF 15.1152 INCHES
		-5.000	310.000	1.000	XREF 12.9510 INCHES
					YREF 6.0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF YAW ANGLE (JET ON)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RV/L	REFERENCE INFORMATION
(CPH031)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF. BVTNI	5.000	310.000	1.000	SREF 7245 SQ. FT.
(CPH030)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF. BVTNI	.000	310.000	1.000	LREF 7.8828 INCHES
(CPH032)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF. BVTNI	-2.500	310.000	1.000	BREF 15.1152 INCHES
(CPH033)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF. BVTNI	-5.000	310.000	1.000	XREF 12.9616 INCHES
					YREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150

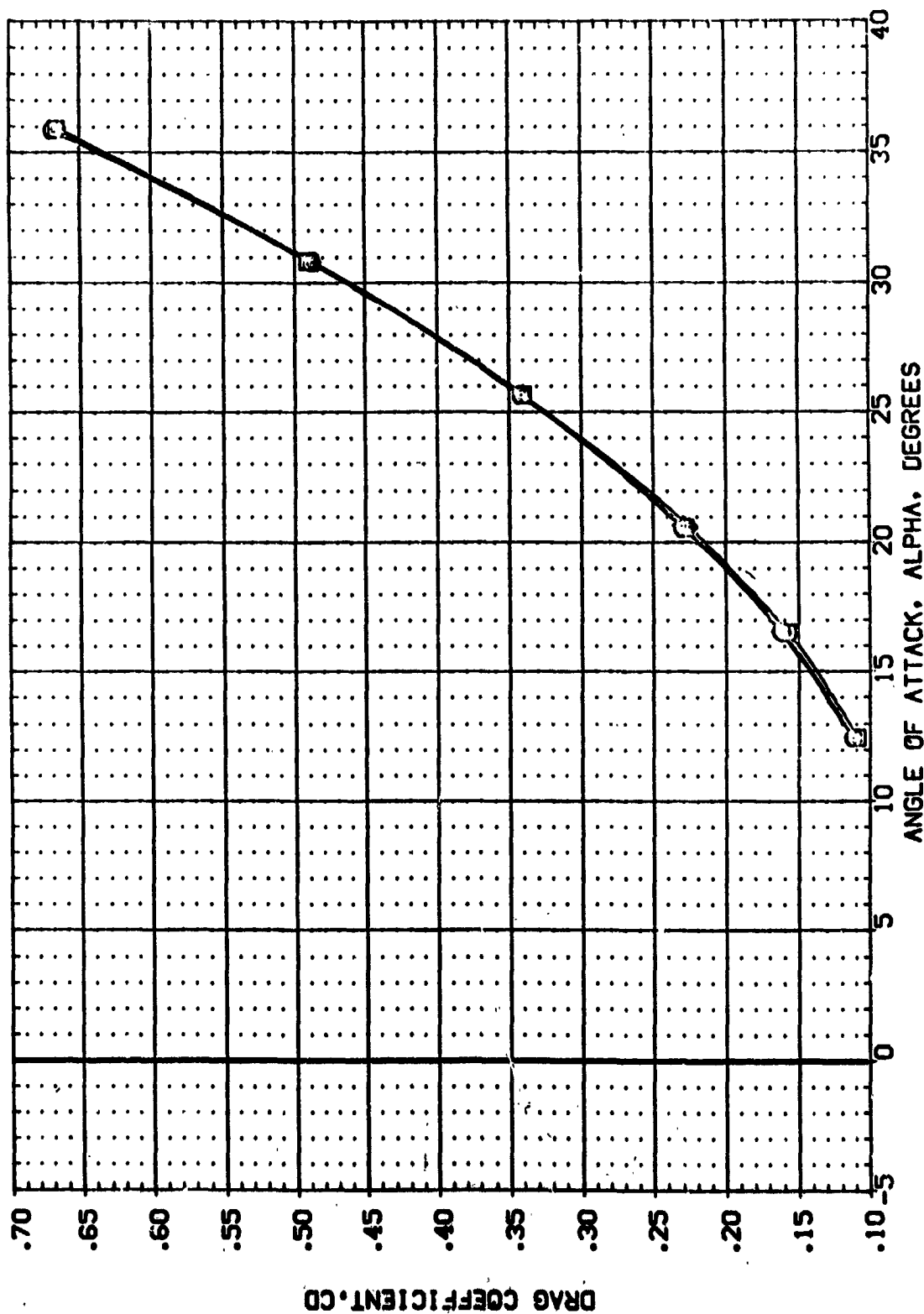


EFFECT OF YAW ANGLE (JET ON)

(A)MACH = 4.00



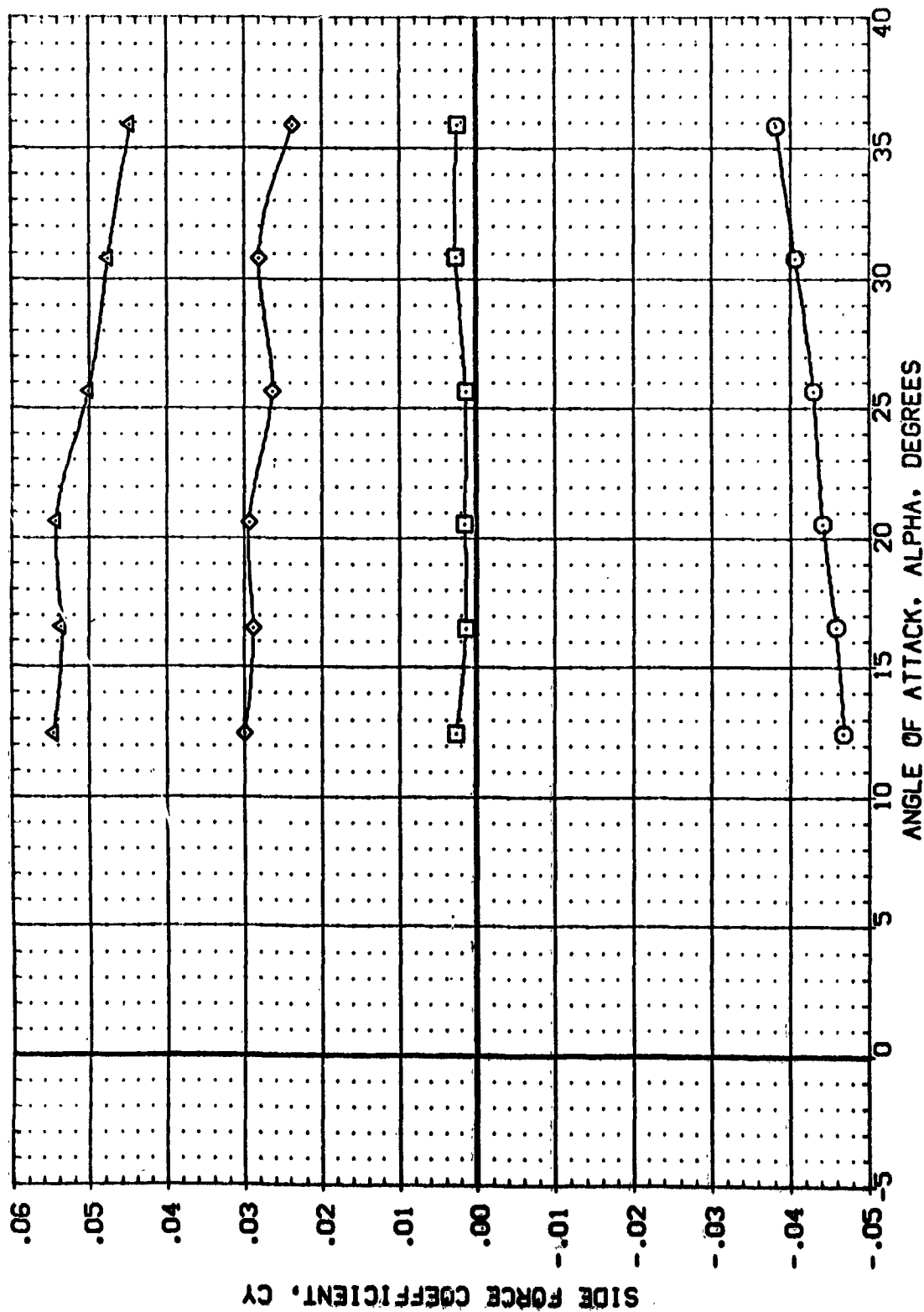
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RM/L	REFERENCE INFORMATION
(CPH031)	MA-7.UPT 1031.ROCKWELL	5.000	310.000	1.000	SREF .7245 SQ.FT.
(CPH032)	MA-7.UPT 1031.ROCKWELL	0.000	310.000	1.000	LREF 7.9828 INCHES
(CPH033)	MA-7.UPT 1031.ROCKWELL	-2.500	310.000	1.000	BREF 15.1152 INCHES
		-5.000	310.000	1.000	XREF 12.9510 INCHES
					YREF 6.0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF YAW ANGLE (JET ON)

(M)MACH = 4.00

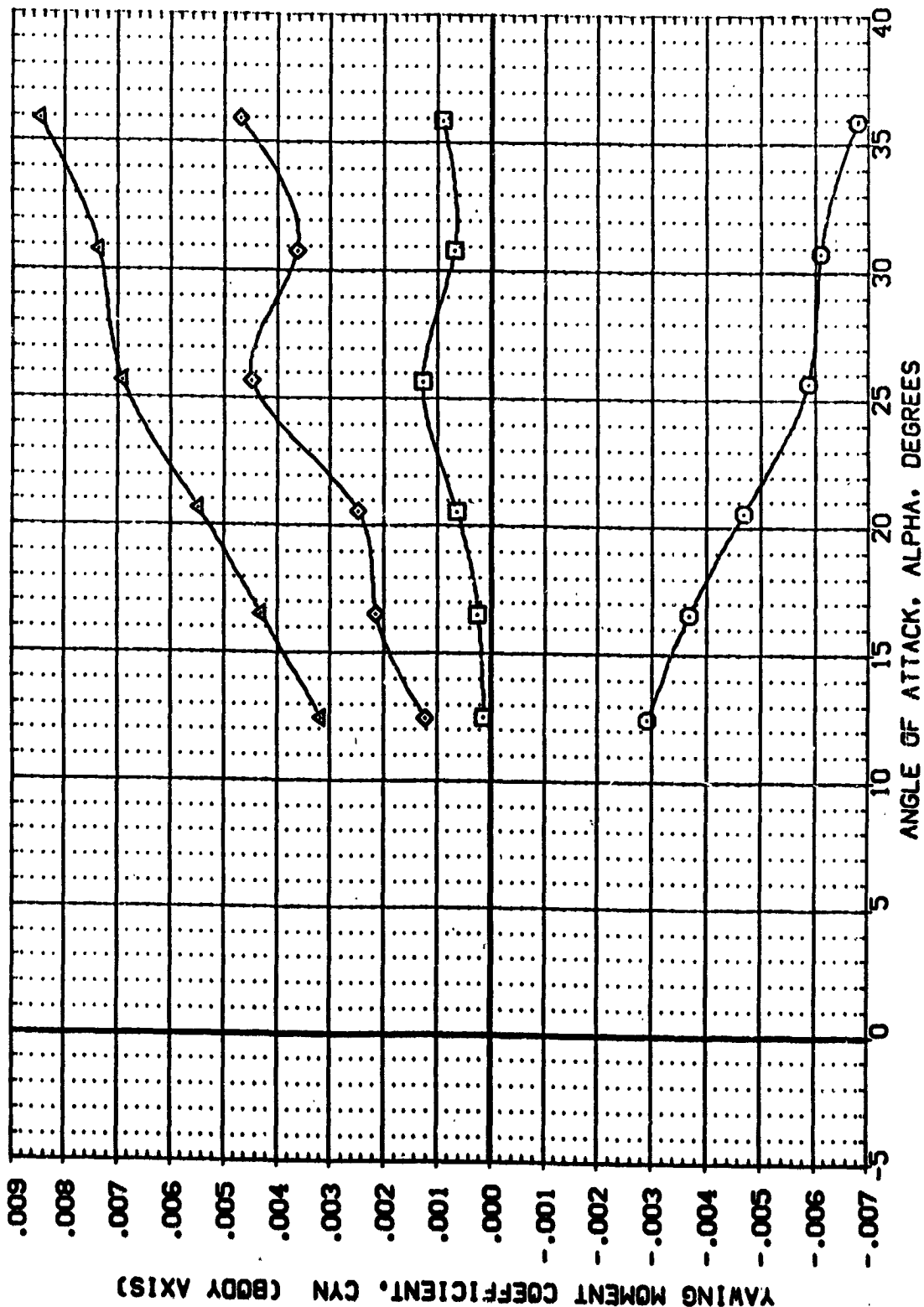
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PC-JET	RN/L	REFERENCE INFORMATION
(CPH031)	MA-7, UPVT 1031, ROCKVELL PRR CR8	5.000	310.000	1.000	SREF 7245 SC.FT.
(CPH030)	MA-7, UPVT 1031, ROCKVELL PRR CR8	.000	310.000	1.000	LREF 7.8828 INCHES
(CPH032)	MA-7, UPVT 1031, ROCKVELL PRR CR8	-2.500	310.000	1.000	BREF 15.1152 INCHES
(CPH033)	MA-7, UPVT 1031, ROCKVELL PRR CR8	-5.000	310.000	1.000	YMRP 12.9510 INCHES
					ZMRP .0000 INCHES
					SCALE 6.0000 INCHES



EFFECT OF YAW ANGLE (JET ON)


(A) MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVAL	REFERENCE INFORMATION
(CP031)	MA-7,UPVT 1031,ROCKWELL	5.000	310.000	1.000	SREF 7245 SQ.FT.
(CP030)	MA-7,UPVT 1031,ROCKWELL	0.000	310.000	1.000	LREF 7.8928 INCHES
(CP032)	MA-7,UPVT 1031,ROCKWELL	-2.500	310.000	1.000	BREF 15.1152 INCHES
(CP033)	MA-7,UPVT 1031,ROCKWELL	-5.000	310.000	1.000	XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



EFFECT OF YAW ANGLE (JET ON)

(A)MACH = 4.00

DATA SET SYMBOL:  CONFIGURATION DESCRIPTION: MA-7, UPVT 1031, ROCKVELL PRR ORB. CONF. BVTNI 5.000 PO-JET RNVL 1.000  
 (CPH031) MA-7, UPVT 1031, ROCKVELL PRR ORB. CONF. BVTNI 1.000  
 (CPH032) MA-7, UPVT 1031, ROCKVELL PRR ORB. CONF. BVTNI 1.000  
 (CPH033) MA-7, UPVT 1031, ROCKVELL PRR ORB. CONF. BVTNI 1.000

REFERENCE INFORMATION:  
 SREF 7.7245 SQ. FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XMRP 12.9533 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 6.0000 INCHES  
 SCALE 0.150



EFFECT OF YAW ANGLE (JET ON)

(A)MACH = 4.00



DATA SET SYMBOL: (CPH031), (CPH032), (CPH033)

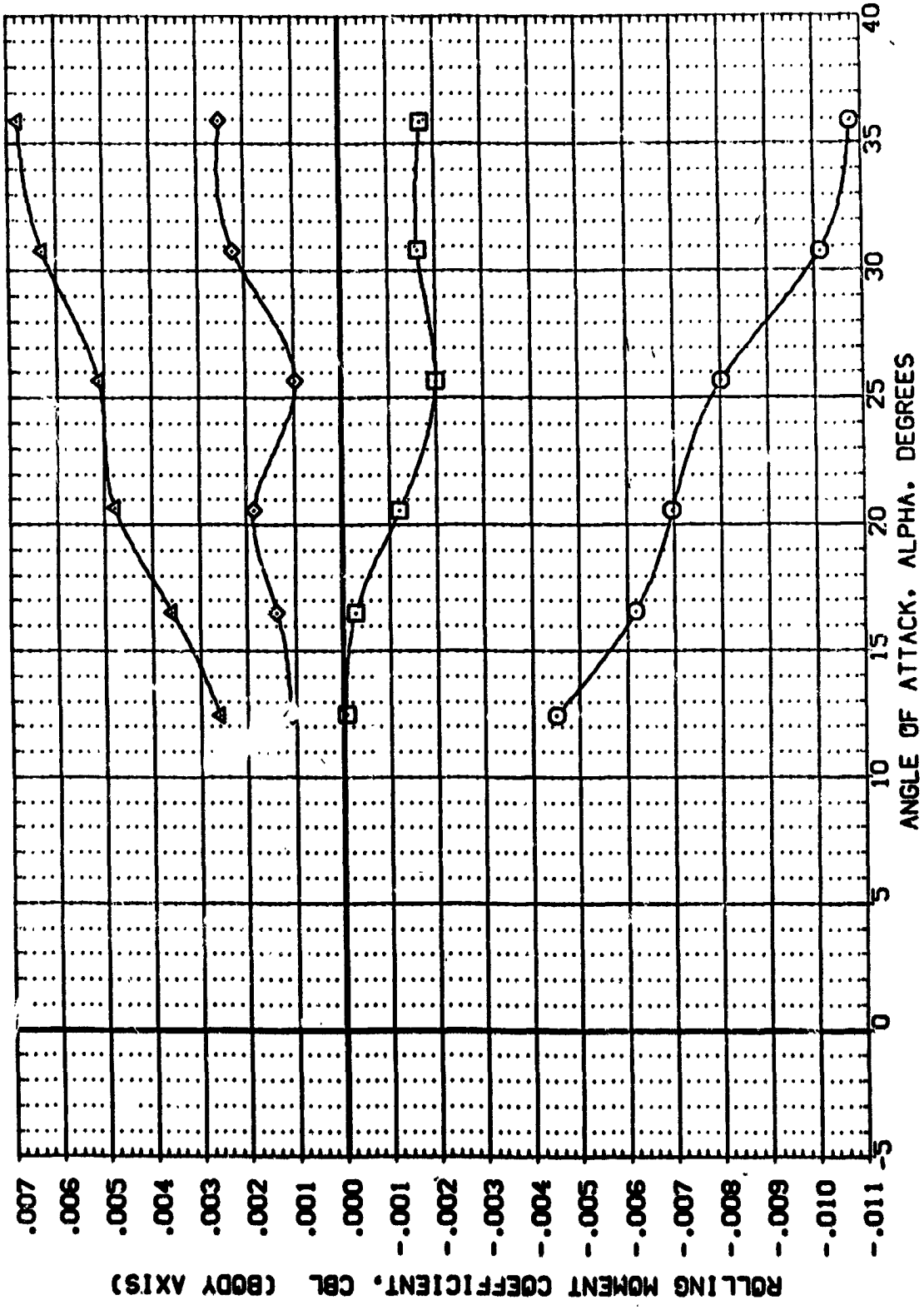
CONFIGURATION DESCRIPTION: MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF, BVNTI; MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF, BVNTI; MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF, BVNTI

BETA: 5.000, 310.000, 1.000; 0.000, 310.000, 1.000; -2.500, 310.000, 1.000; -5.000, 310.000, 1.000

PO-JET: RVAL

REFERENCE INFORMATION: SREF, LREF, XREF, YREF, ZREF, SCALE; 7245, 7.8828, 15.1152, 12.9510, .0000, 6.0000, .0150

SO, FT, IN, IN, IN, IN, IN

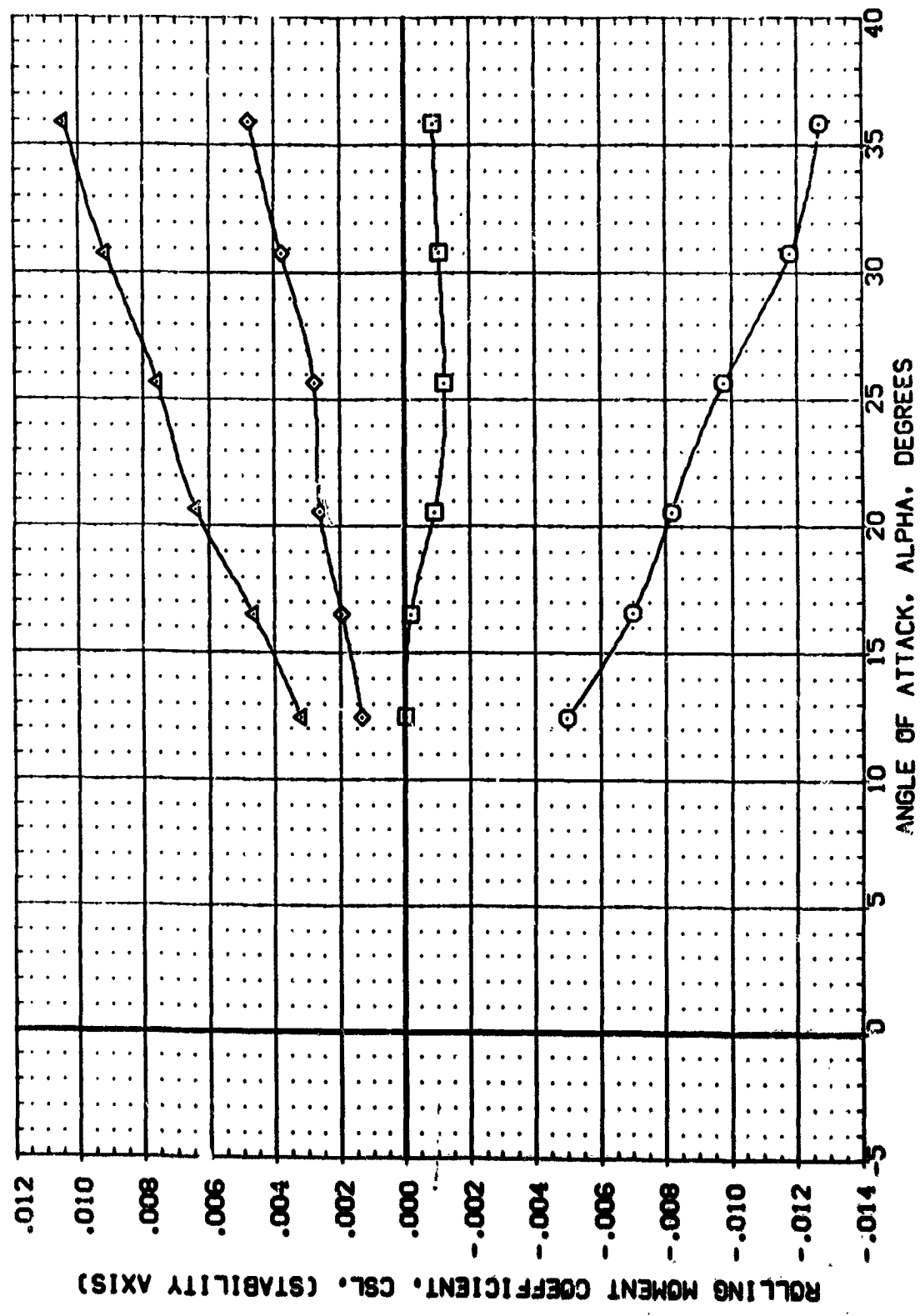


EFFECT OF YAW ANGLE (JET ON)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RNVL	REFERENCE INFORMATION
(CPH031)	MA-7, UPVT 1031, ROCKVELL PER CR8, CONF: BVTVI	5.000	310.000	1.000	SREF 7245 SO.FT.
(CPH032)	MA-7, UPVT 1031, ROCKVELL PER CR8, CONF: BVTVI	0.000	310.000	1.000	LREF 7.8828 INCHES
(CPH033)	MA-7, UPVT 1031, ROCKVELL PER CR8, CONF: BVTVI	-2.500	310.000	1.000	BREF 15.1152 INCHES
(CPH033)	MA-7, UPVT 1031, ROCKVELL PER CR8, CONF: BVTVI	-5.000	310.000	1.000	XMRP 12.5510 INCHES
					YMRP 0.0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150

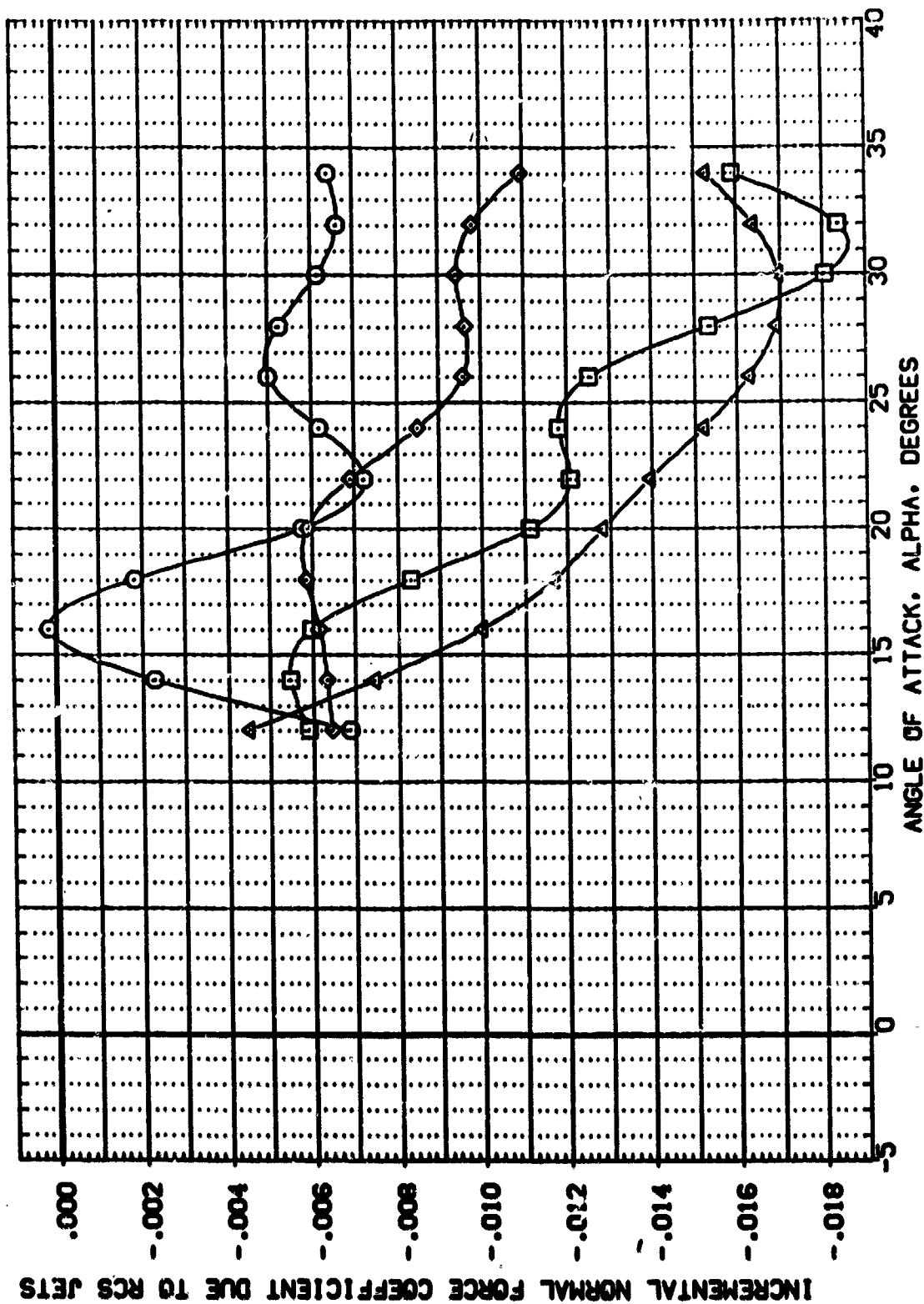


EFFECT OF YAW ANGLE (JET ON)

(A)MACH = 4.00



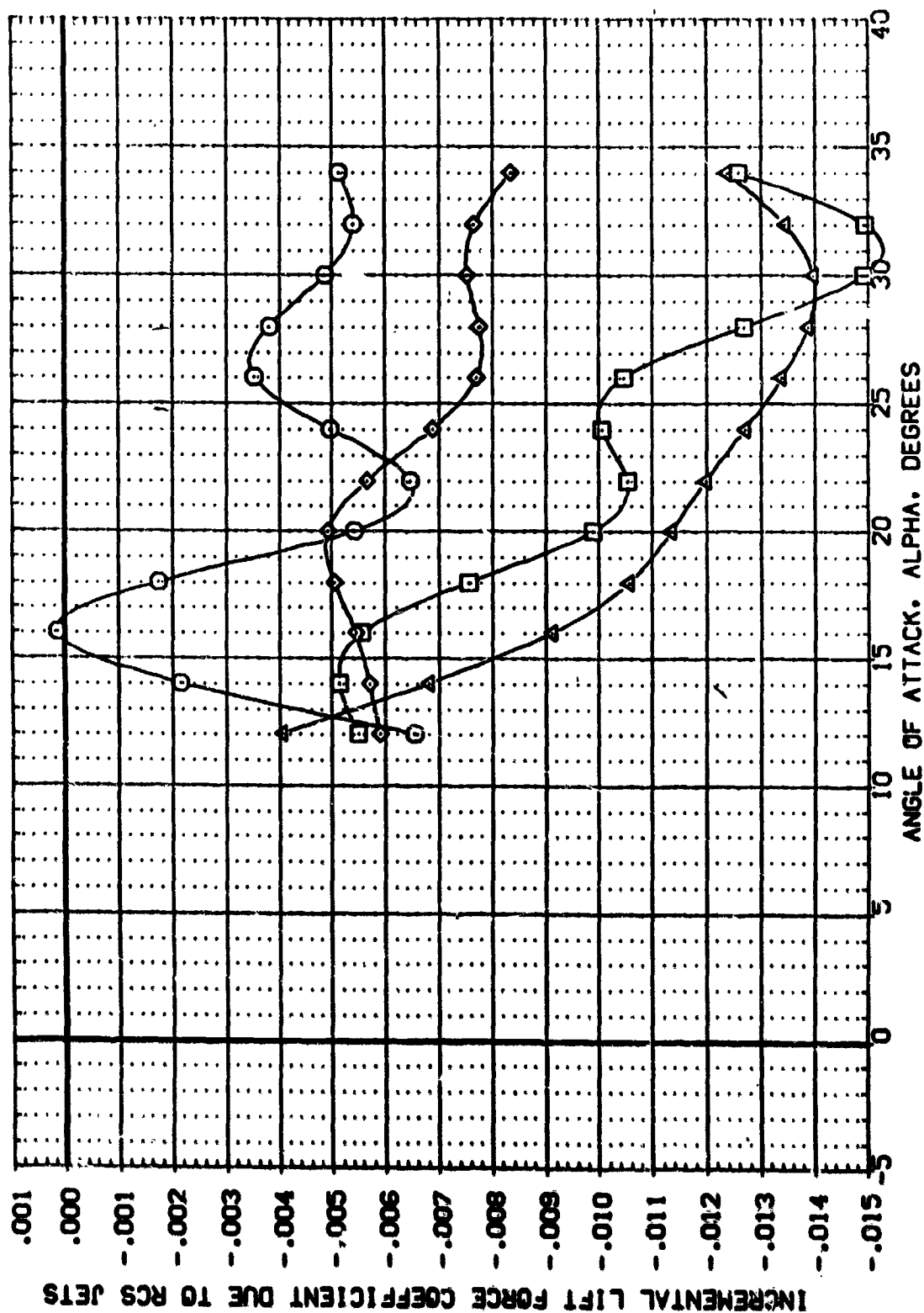
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RM/L	REFERENCE INFORMATION
(AP025)	NA-7-UPVT 1031: ROCKWELL PRR 088: CONF.	.000	35.000	.000	SREF 7245 SC.FT.
(AP025)	NA-7-UPVT 1031: ROCKWELL PRR 088: CONF.	.000	188.000	.000	LREF 7.8528 INCHES
(AP030)	NA-7-UPVT 1031: ROCKWELL PRR 088: CONF.	.000	310.000	.000	BREF 15.1152 INCHES
(AP035)	NA-7-UPVT 1031: ROCKWELL PRR 088: CONF.	.000	600.000	.000	XREF 12.96 INCHES
					YREF 6.000 INCHES
					ZREF 6.000 INCHES
					SCALE 0.0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET PRESSURE

(M)MACH = 4.00

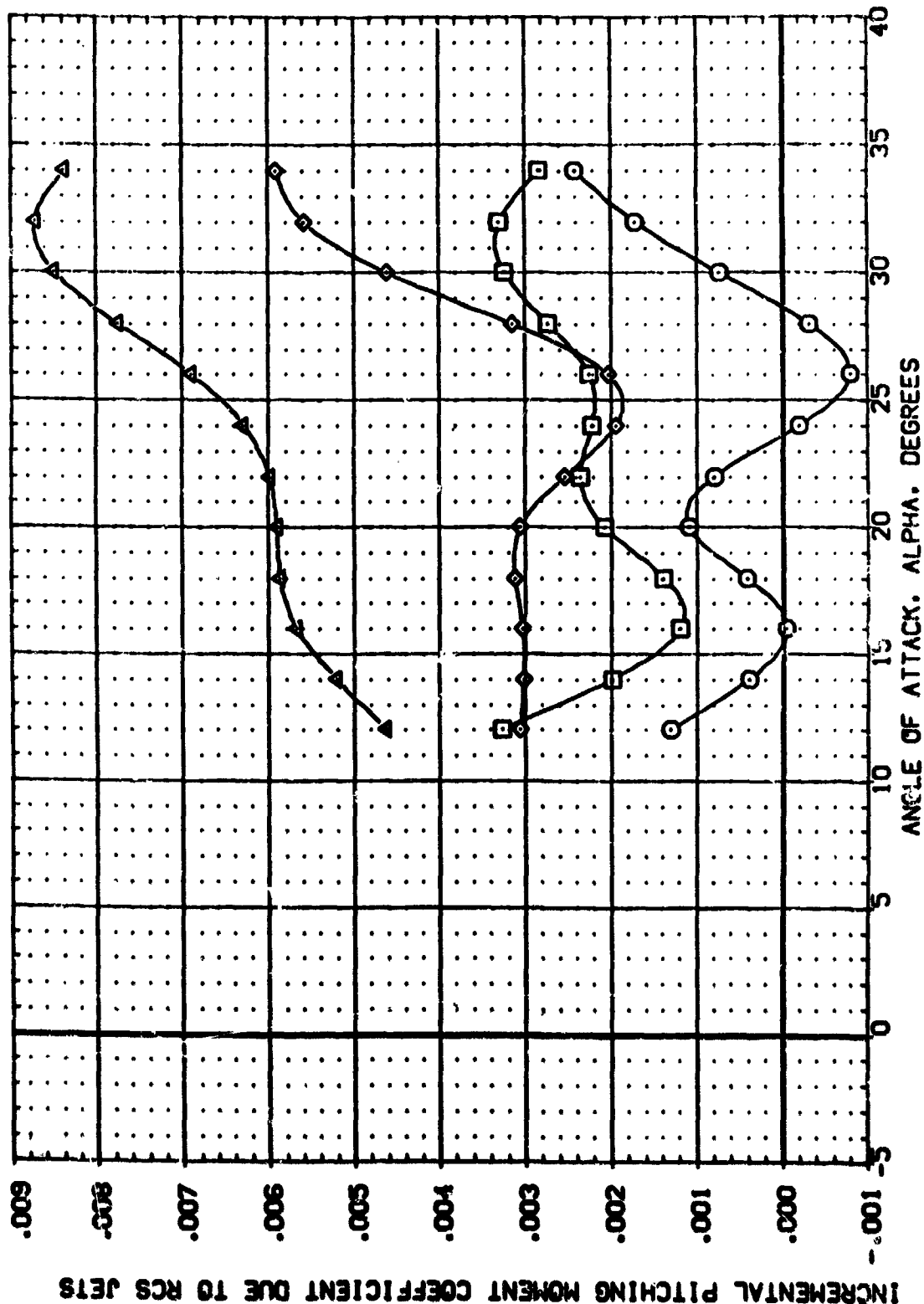
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVL	REFERENCE INFORMATION
(AP026)	MA-7, UPVT 1031, ROCKWELL PRR Q88, CONF.	.000	35.000	.000	SREF 7245 50 FT.
(AP029)	MA-7, UPVT 1031, ROCKWELL PRR Q88, CONF.	.000	188.000	.000	LREF 7.8528 INCHES
(AP030)	MA-7, UPVT 1031, ROCKWELL PRR Q88, CONF.	.000	310.000	.000	BREF 15.1152 INCHES
(AP035)	MA-7, UPVT 1031, ROCKWELL PRR Q88, CONF.	.000	600.000	.000	XREF 12.9510 INCHES
					YREF 6.0000 INCHES
					ZREF 6.0000 INCHES
					SCALE 1.0100



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET PRESSURE

(M)MACH = 4.00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA		DLPO-J		RVL		REFERENCE INFORMATION	
(AP026)	MA-7-LPVT	1031, RODWELL	PRR	0.00	35.000	1.000	SREF	7.245	50. FT.		
(AP029)	MA-7-LPVT	1031, RODWELL	PRR	0.00	188.000	1.000	LREF	7.8828	INCHES		
(AP030)	MA-7-LPVT	1031, RODWELL	PRR	0.00	310.000	1.000	BREF	15.1152	INCHES		
(AP035)	MA-7-LPVT	1031, RODWELL	PRR	0.00	600.000	1.000	XREF	12.9510	INCHES		
							YREF	6.0000	INCHES		
							ZREF	6.0000	INCHES		
							SCALE	.0150			

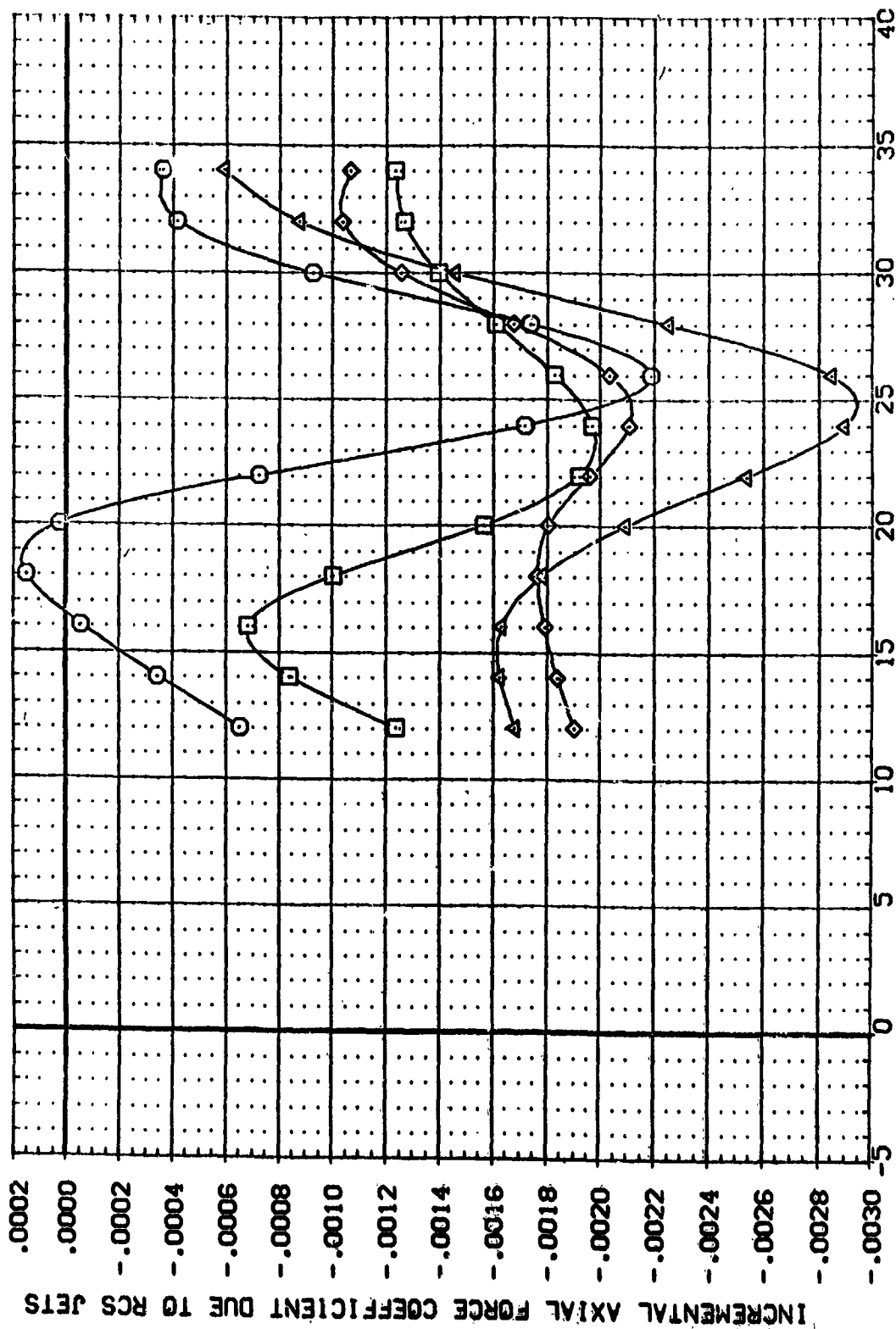


INCREMENTAL PITCHING MOMENT COEFFICIENT DUE TO RCS JETS

(A)MACH = 4.00

DATA SET SYMBOL      CONFIGURATION DESCRIPTION      BETA      DLPQ-J      RV/L      REFERENCE INFORMATION

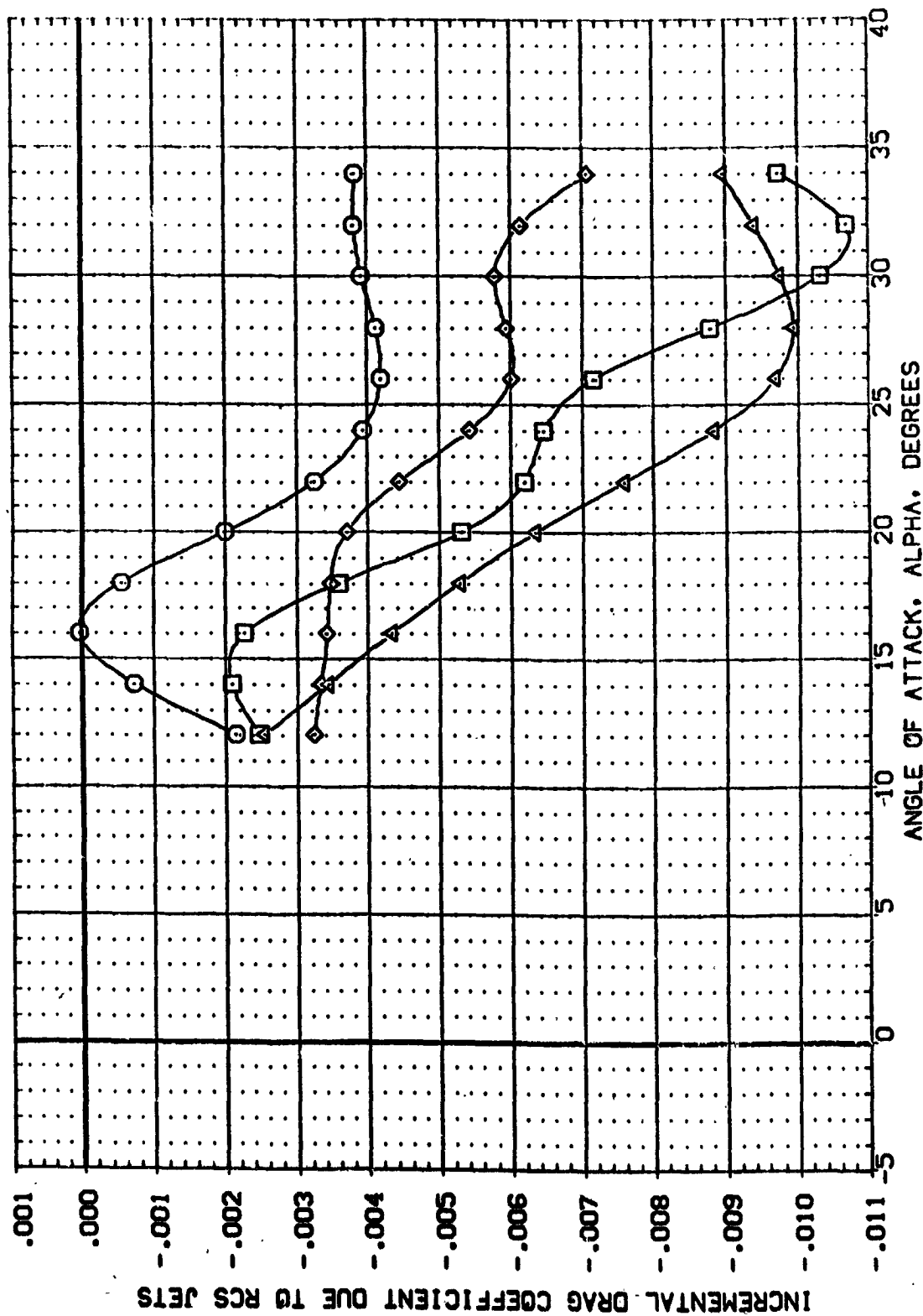
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPQ-J	RV/L	REFERENCE INFORMATION
(APM026)	MA-7-UPVT 1031, ROCKVELL PRR CR8	.000	35.000	1.000	SREF 7245 SQ. FT.
(APM029)	MA-7-UPVT 1031, ROCKVELL PRR CR8	.000	188.000	1.000	LREF 7.8828 INCHES
(APM030)	MA-7-UPVT 1031, ROCKVELL PRR CR8	.000	310.000	1.000	BREF 15.1152 INCHES
(APM033)	MA-7-UPVT 1031, ROCKVELL PRR CR8	.000	600.000	1.000	XTRP 12.9510 INCHES
					YTRP .0000 INCHES
					ZTRP .0150 INCHES
					SCALE



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET PRESSURE

(AJMACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVL	REFERENCE INFORMATION
(AP026)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	35.000	1.000	SREF 7245 SQ. FT.
(AP029)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	188.000	1.000	LREF 7.8828 INCHES
(AP032)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	310.000	1.000	BREF 15.1152 INCHES
(AP035)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	600.000	1.000	YMRP 12.9510 INCHES
					ZMRP 6.0000 INCHES
					SCALE 1:0.150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET PRESSURE

(MACH = 4.00)

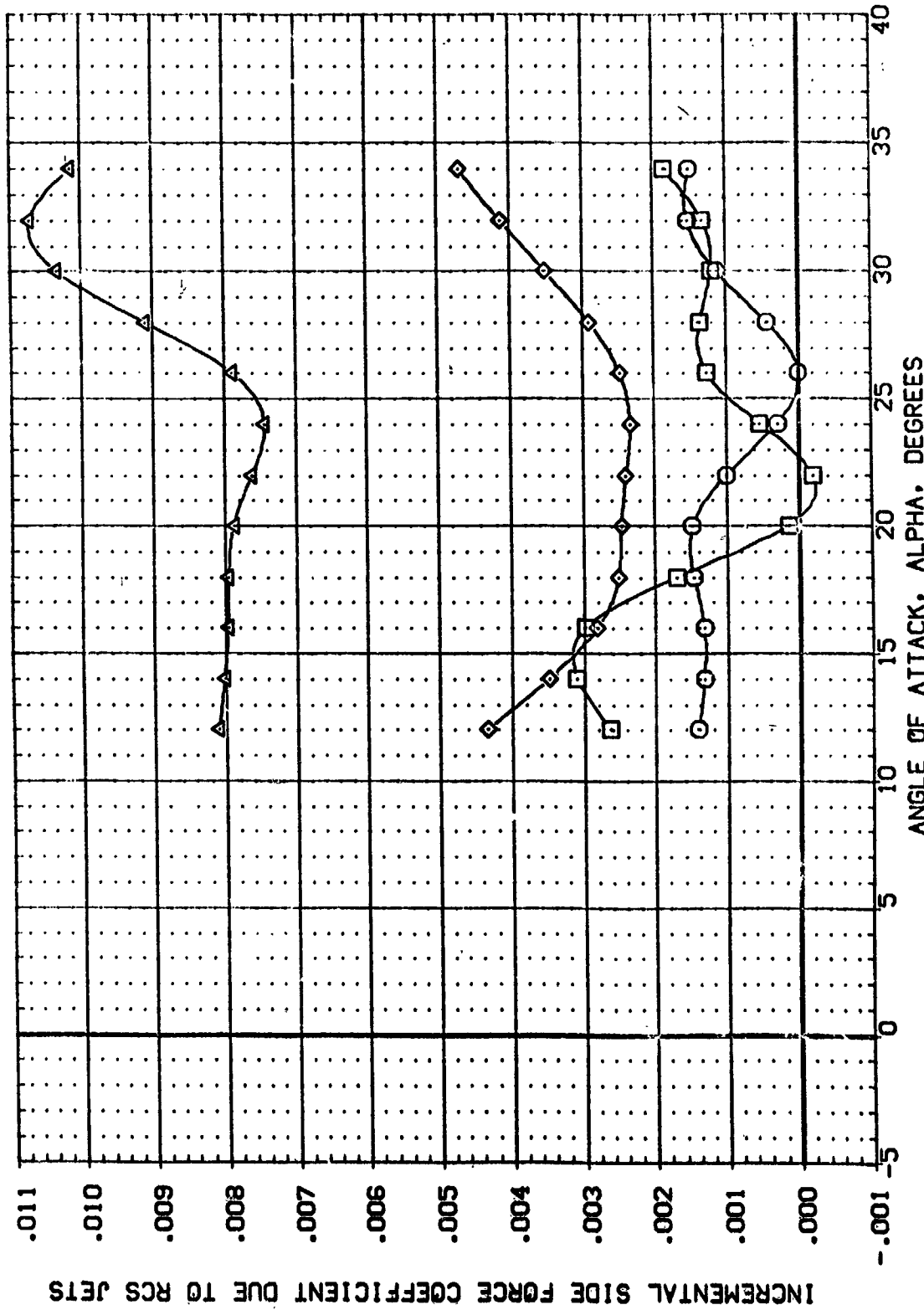
DATA SET SYMBOL  
 (AP026)  
 (AP029)  
 (AP030)  
 (AP035)

CONFIGURATION DESCRIPTION  
 MA-7, UPVT 1031, ROCKWELL PRR C88.  
 MA-7, UPVT 1031, ROCKWELL PRR C88.  
 MA-7, UPVT 1031, ROCKWELL PRR C88.  
 MA-7, UPVT 1031, ROCKWELL PRR C88.

CONF. CONF. CONF. CONF.  
 BVTNI BVTNI BVTNI BVTNI

BETA DLPO-J RV/L  
 .000 35.000 1.000  
 .000 188.000 1.000  
 .000 310.000 1.000  
 .000 600.000 1.000

REFERENCE INFORMATION  
 SREF .7245 SQ.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XMRP 12.9510 INCHES  
 YMRP .0000 INCHES  
 ZMRP .0000 INCHES  
 SCALE .0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET PRESSURE

(MACH = 4.00

DATA SET SYMBOL: (AP026) (AP028) (AP030) (AP035)

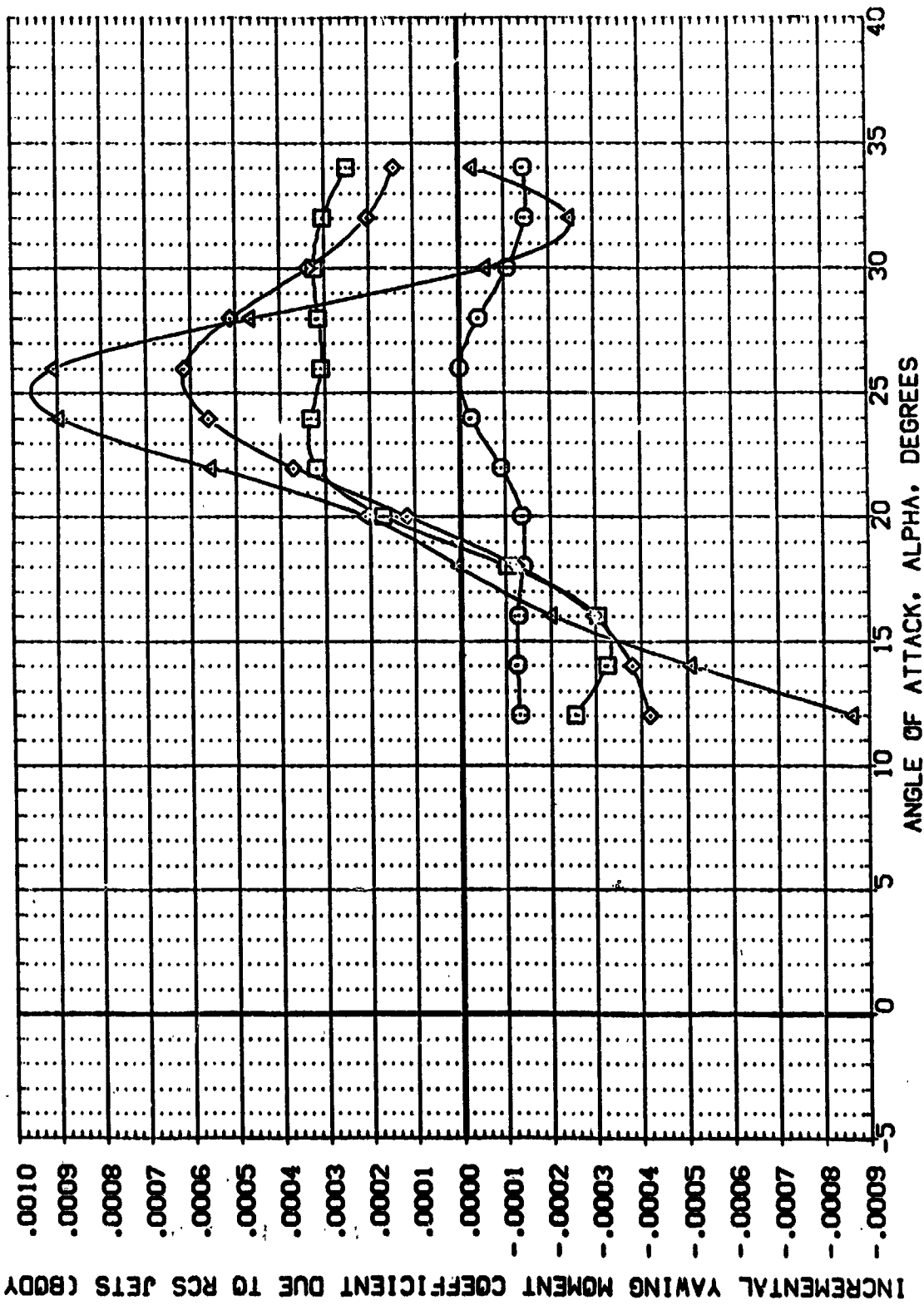
CONFIGURATION DESCRIPTION: MA-7-LPVT 1031: ROCKWELL PRR ORB: CONF. MA-7-LPVT 1031: ROCKWELL PRR ORB: CONF. MA-7-LPVT 1031: ROCKWELL PRR ORB: CONF. MA-7-LPVT 1031: ROCKWELL PRR ORB: CONF.

BETA: .000 .000 .000 .000

DLPO-J: 35.000 183.000 310.000 600.000


RNVL: 1.000 1.000 1.000 1.000

REFERENCE INFORMATION: SREF: 7245 SC.FT. LREF: 7.8628 AC.FT. BREF: 15.1152 AC.FT. XMRP: 12.9512 AC.FT. YMRP: .0000 AC.FT. ZMRP: .0000 AC.FT. SCALE: 6.0150 AC.FT.



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET PRESSURE  
(A)MACH = 4.00



DATA SET SYMBOL:  MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF. BVTNI

CONFIGURATION DESCRIPTION: MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF. BVTNI

BETA: .000 DLPO-J: 35.000 RV/L: 1.000

REFERENCE INFORMATION: SREF: 7245 SO.FT. INCHES

LREF: 7.8628 INCHES

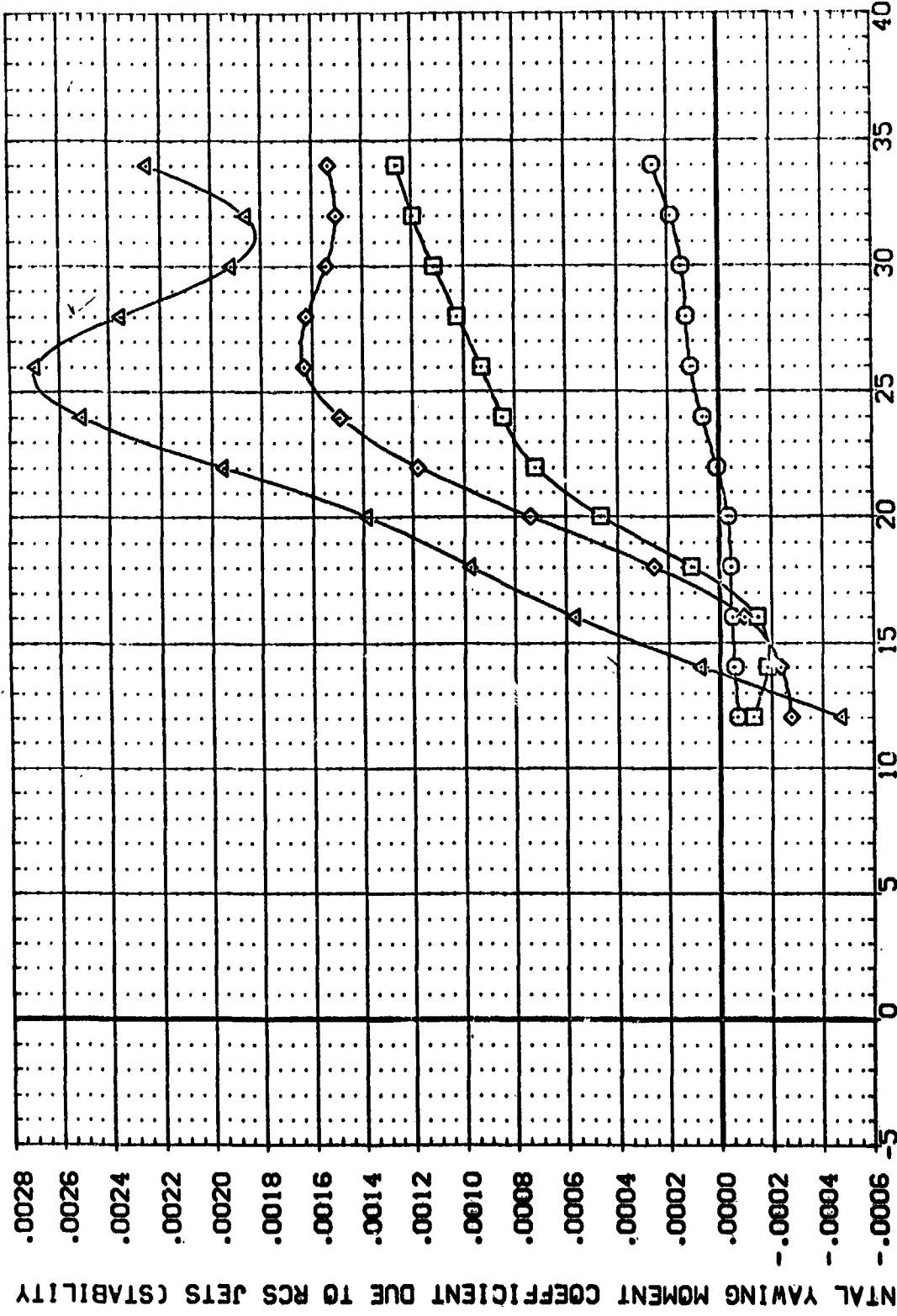
XREF: 15.1152 INCHES

YREF: 12.9510 INCHES

ZREF: .0000 INCHES

SCALE: 6.0000 INCHES

.0150



INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (STABILITY AXIS)

ANGLE OF ATTACK, ALPHA, DEGREES

YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET PRESSURE

(A)MACH = 4.00

REFERENCE INFORMATION

SREF	.7245	50. FT.
LREF	7.8828	INCHES
BREF	15.1152	INCHES
XMRP	12.9510	INCHES
YMRP	.0000	INCHES
ZMRP	6.0000	INCHES
SCALE	.0150	

BETA

DLPO-J	RVL
.000	1.000
.000	1.000
.000	1.000
.000	1.000

DATA SET SYMBOL

MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.

DATA SET SYMBOL

MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.

DATA SET SYMBOL

MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.

DATA SET SYMBOL

MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.

DATA SET SYMBOL

MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.

DATA SET SYMBOL

MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.

DATA SET SYMBOL

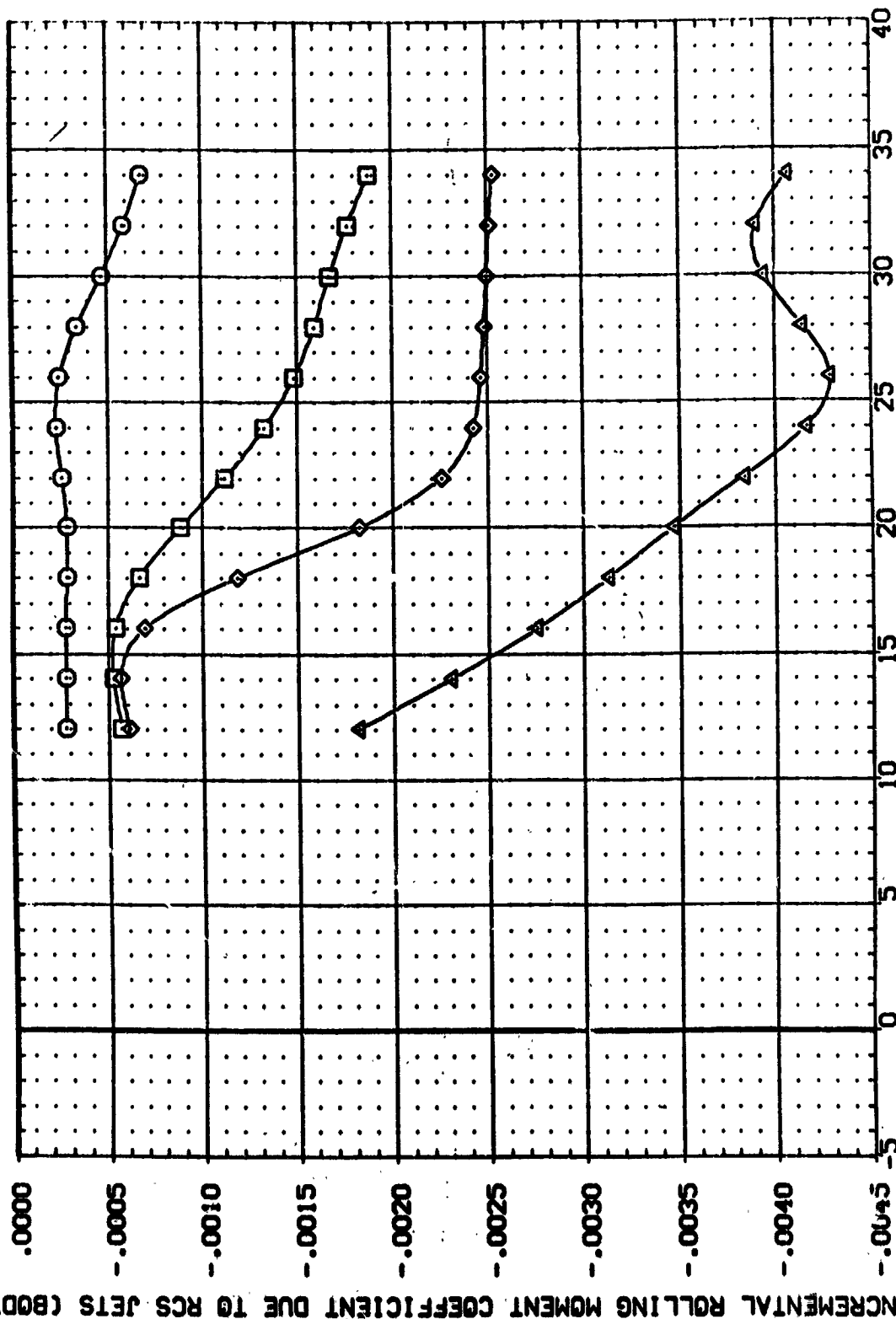
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.

DATA SET SYMBOL

MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.

DATA SET SYMBOL

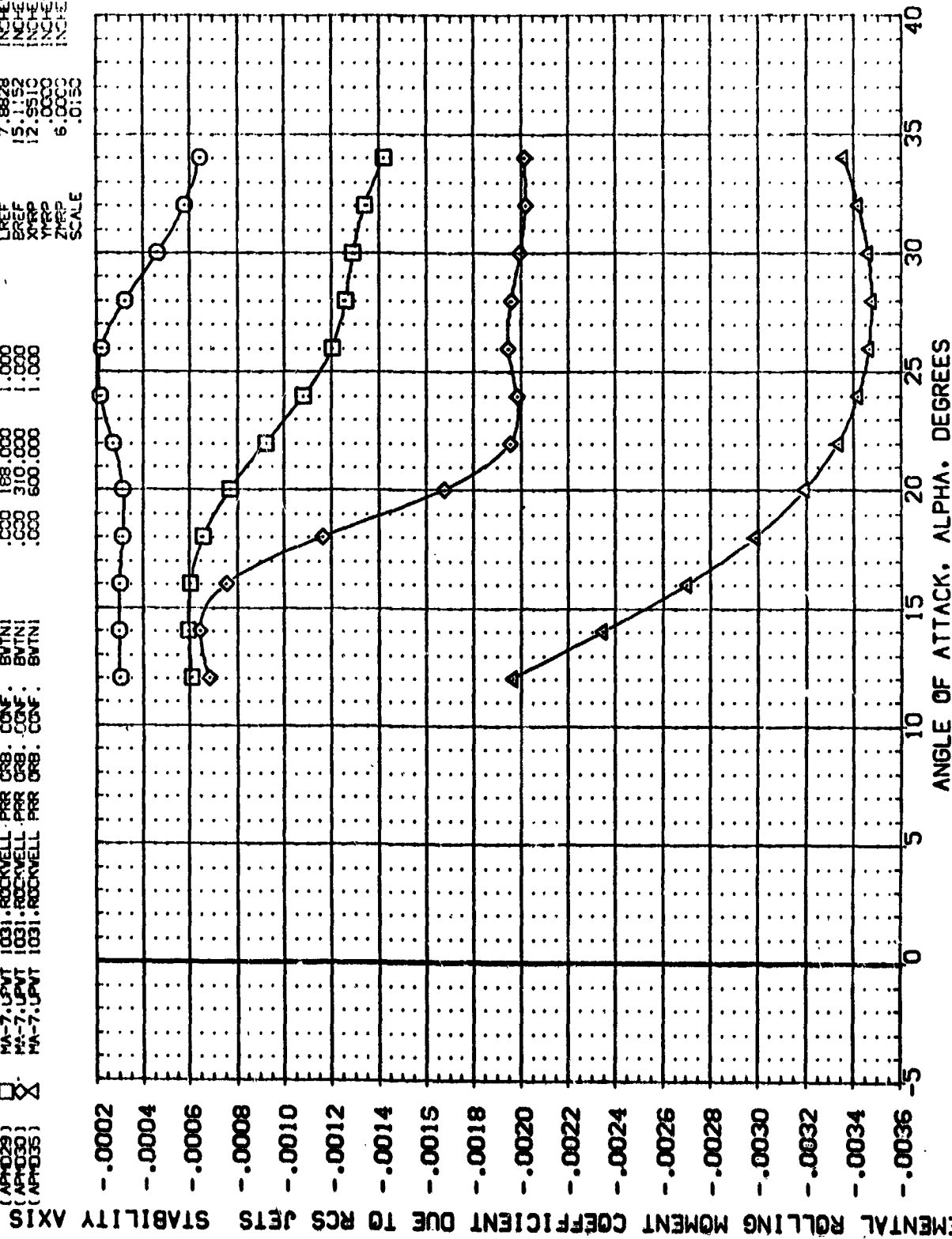
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.
MA-7, UPVT	1031, ROCKWELL	CONF.	CONF.



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET PRESSURE

(M)MACH = 4.00

REFERENCE INFORMATION	
SREF	.7245 SO.FT.
LREF	7.8828 INCHES
BREF	15.1152 INCHES
XPRP	12.5510 INCHES
YPRP	.0000 INCHES
ZPRP	6.0000 INCHES
SCALE	.0150



### YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET PRESSURE

**CAJMACH = 4.00**

REFERENCE INFORMATION  
 SREF 7.245 SQ.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XREF 12.9510 INCHES  
 YREF 6.0000 INCHES  
 ZREF 6.0000 INCHES  
 SCALE .0150

BETA DLPO-J RV/L  
 .000 187.000 3.000  
 -5.000 187.000 3.000

BVTNI  
 BVTNI

CONF. CONF.  
 ORB. ORB.

CONF. CONF.  
 ORB. ORB.

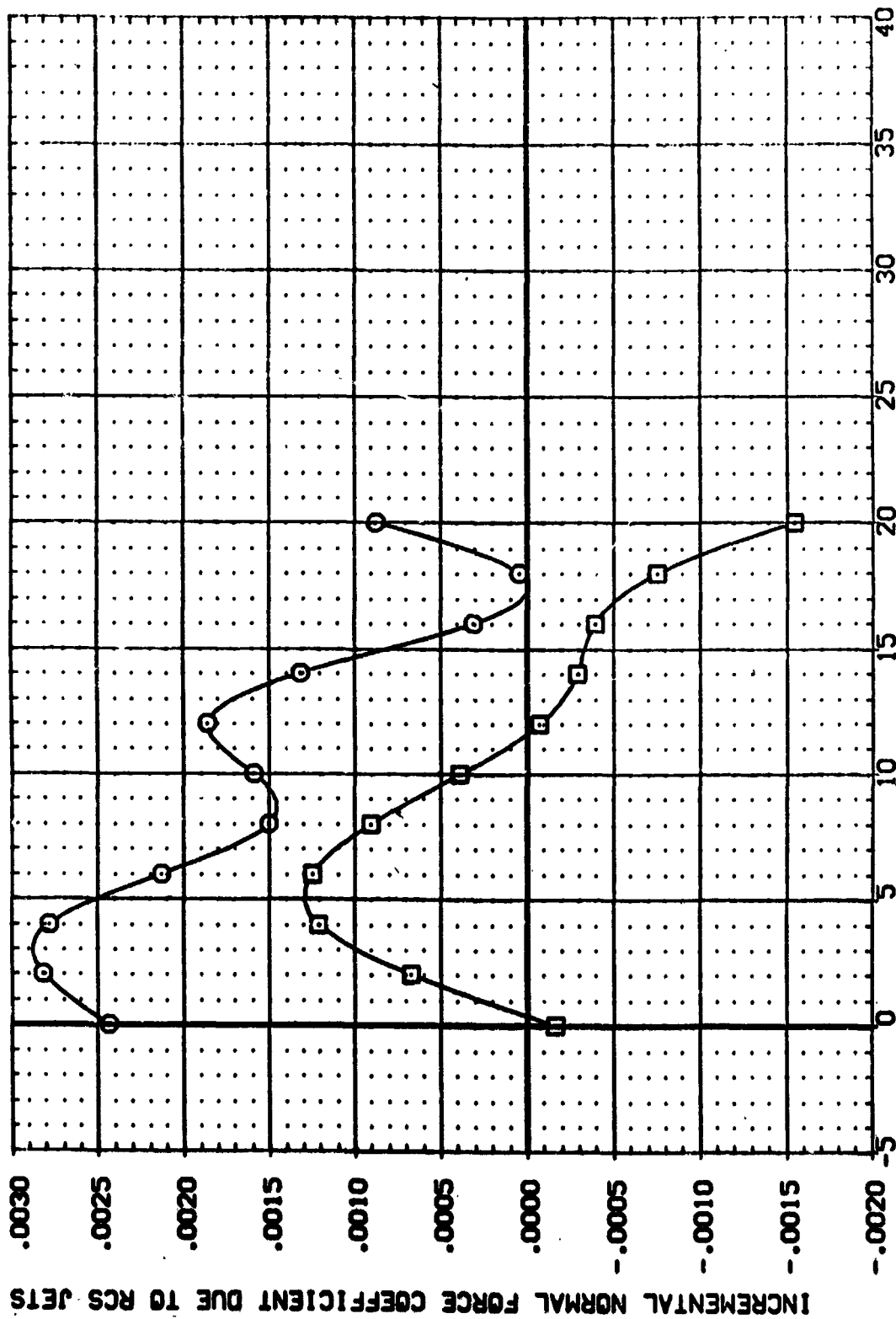
CONF. CONF.  
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 ORB. ORB.

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 ORB. ORB.

CONF. CONF.  
 ORB. ORB.

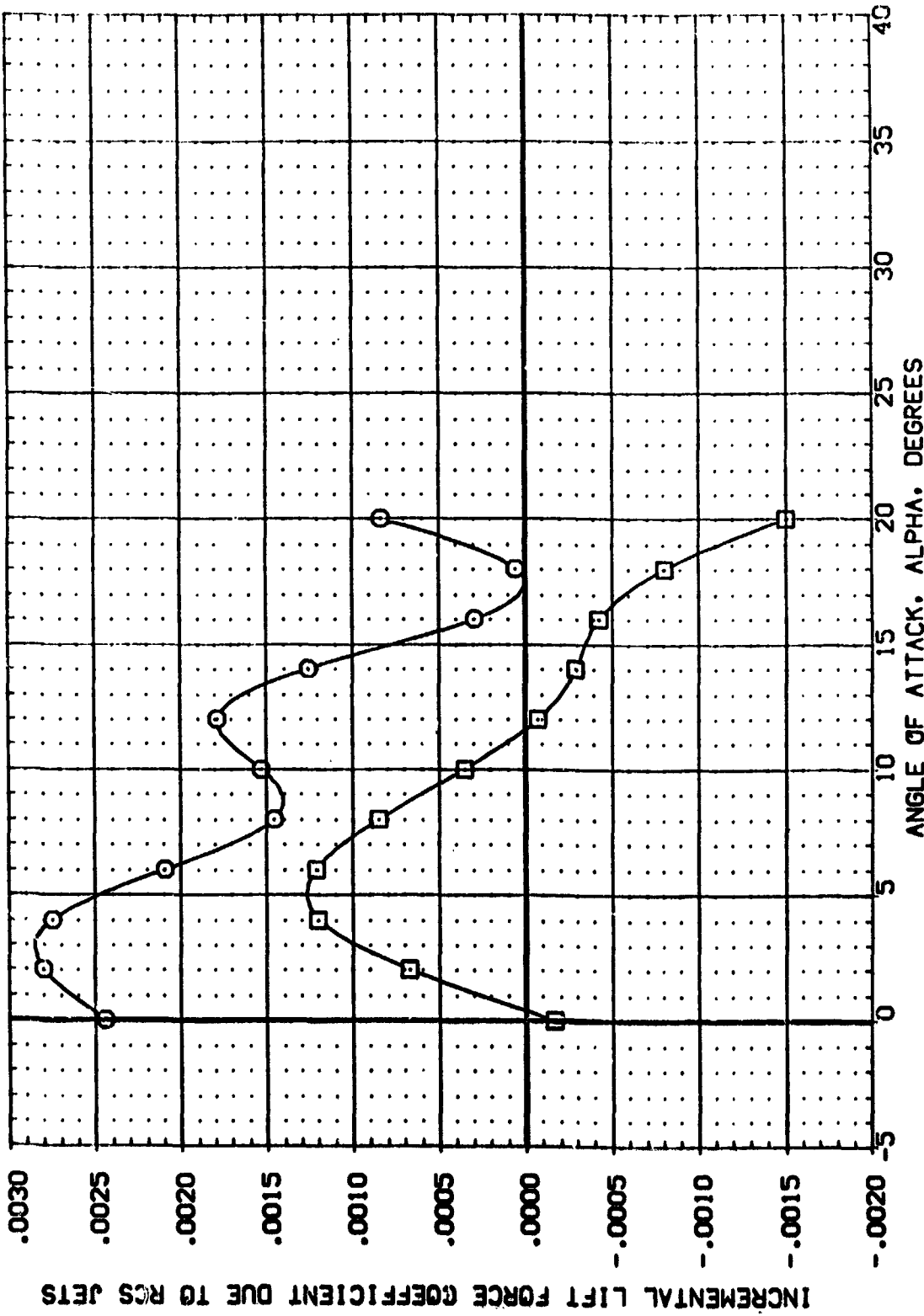


YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE  
 (A)MACH = 2.50

DATA SET SYMB. CONFIGURATION DESCRIPTION  
 (APND18) MA-7-UPVT 1031, ROCKWELL PRR ORS. CONF. BVTN1  
 (APND19) MA-7-UPVT 1031, ROCKWELL PRR ORS. CONF. BVTN1

BETA DLP0-J RN/L  
 .000 187.000 3.000  
 -.000 187.000 3.000

REFERENCE INFORMATION  
 SREF .7245 SQ. FT.  
 LREF 7.8328 INCHES  
 BREF 15.1152 INCHES  
 XMRP 12.9510 INCHES  
 YMRP .0000 INCHES  
 ZMRP 6.0000 INCHES  
 SCALE .0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 2.50

REFERENCE INFORMATION  
 SREF 7.7245 SQ.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XMRP 12.9510 INCHES  
 YMRP .0000 INCHES  
 ZMRP 6.0000 INCHES  
 SCALE .0150

BETA DLPO-J RN/L  
 .000 187.000 3.000  
 -5.000 187.000 3.000

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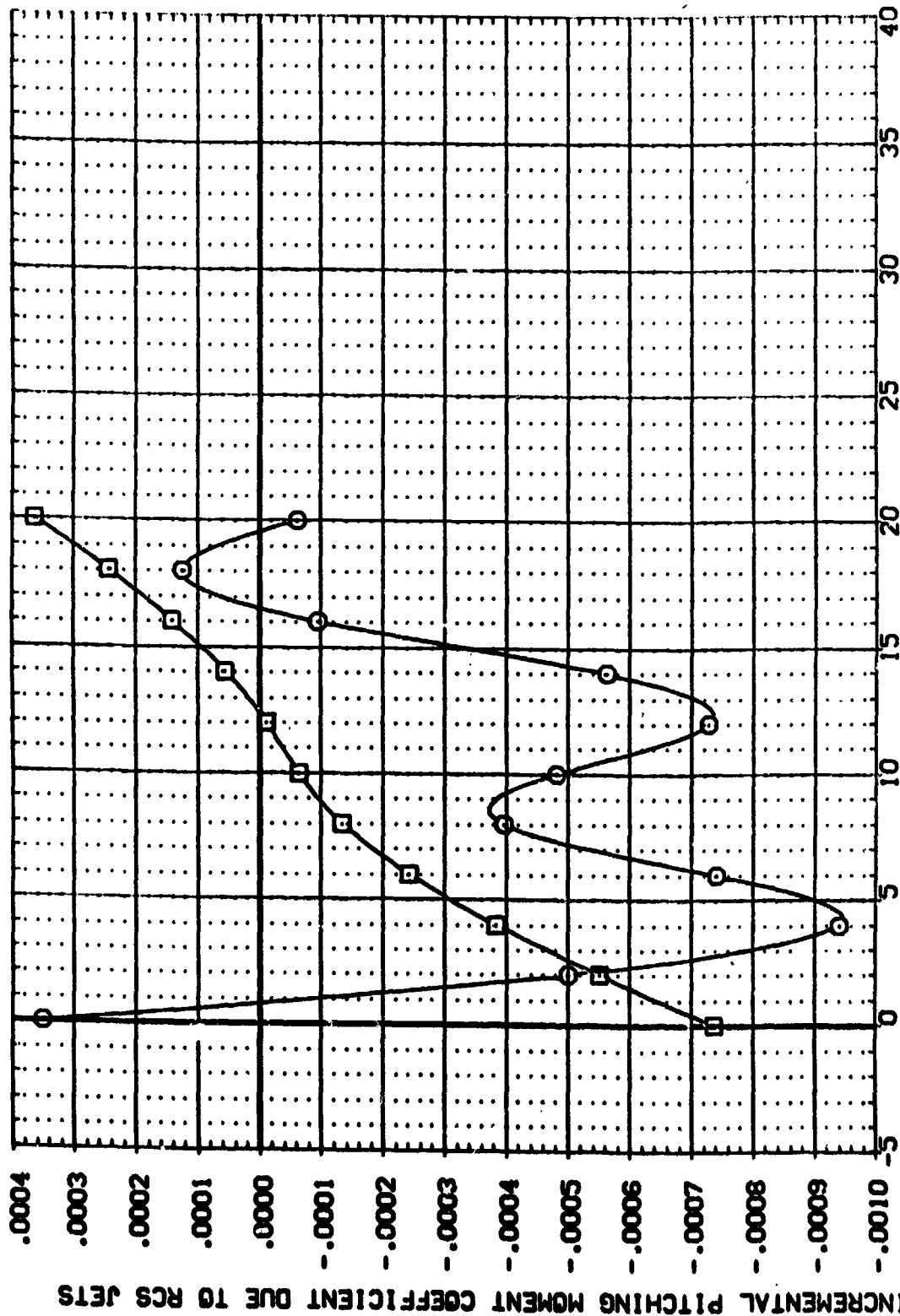
CONF. CONF.

CONF. CONF.

CONF. CONF.

CONF. CONF.

CONF. CONF.



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 2.50

REFERENCE INFORMATION

SREF	7245	SQ.FT.
LREF	7.8828	INCHES
BREF	15.1152	INCHES
YMRP	12.9516	INCHES
ZMRP	.0000	INCHES
SCALE	6.0000	INCHES
	.0150	

BETA

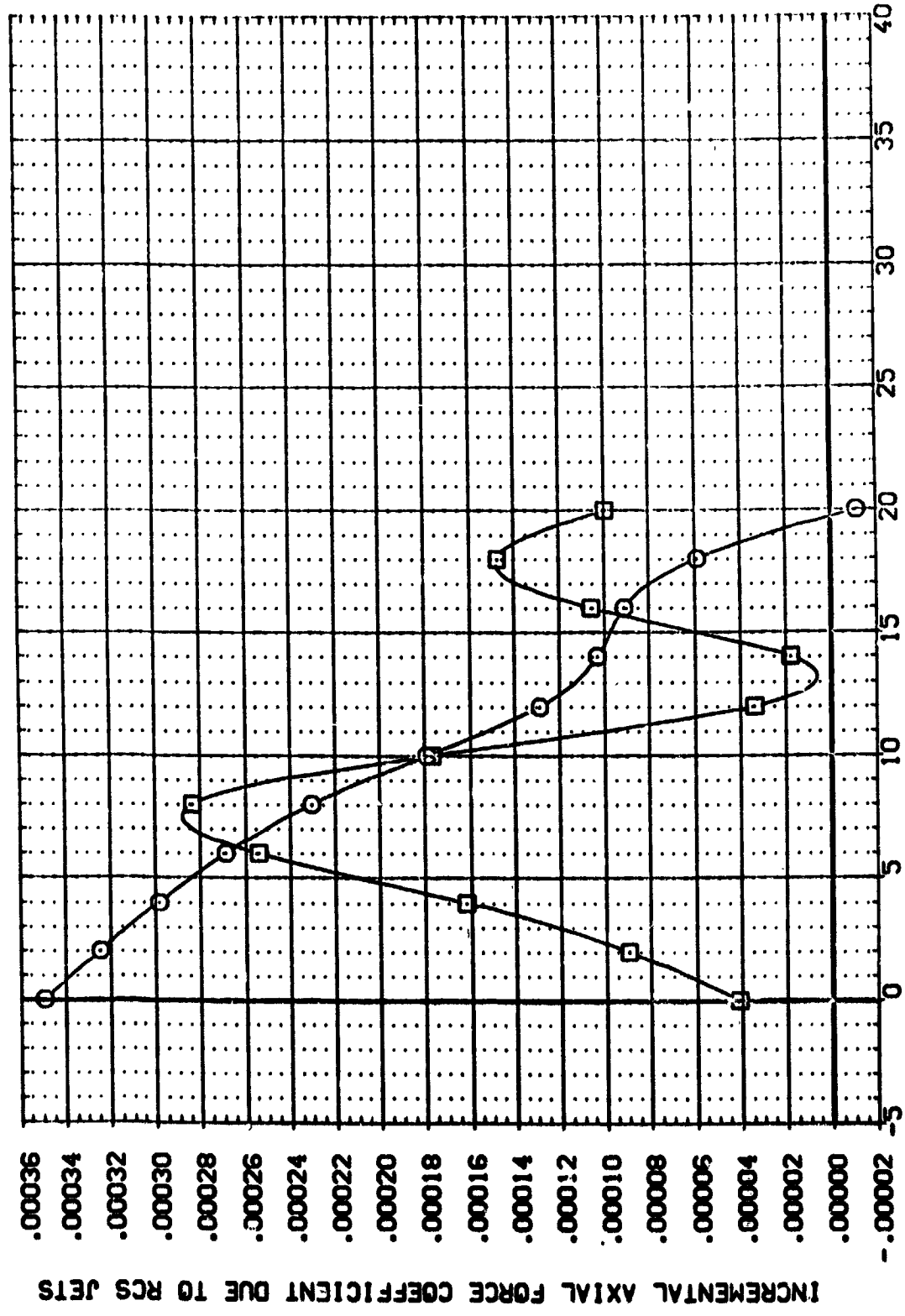
DLPO-J	RNAL
.000	3.000
-5.000	3.000

DATA SET SYMBOL

MA-7.0PVT 1031.ROCKWELL PRR 088. CONF: BVTNI
MA-7.0PVT 1031.ROCKWELL PRR 088. CONF: BVTNI

CONFIGURATION DESCRIPTION

MA-7.0PVT 1031.ROCKWELL PRR 088. CONF: BVTNI
MA-7.0PVT 1031.ROCKWELL PRR 088. CONF: BVTNI

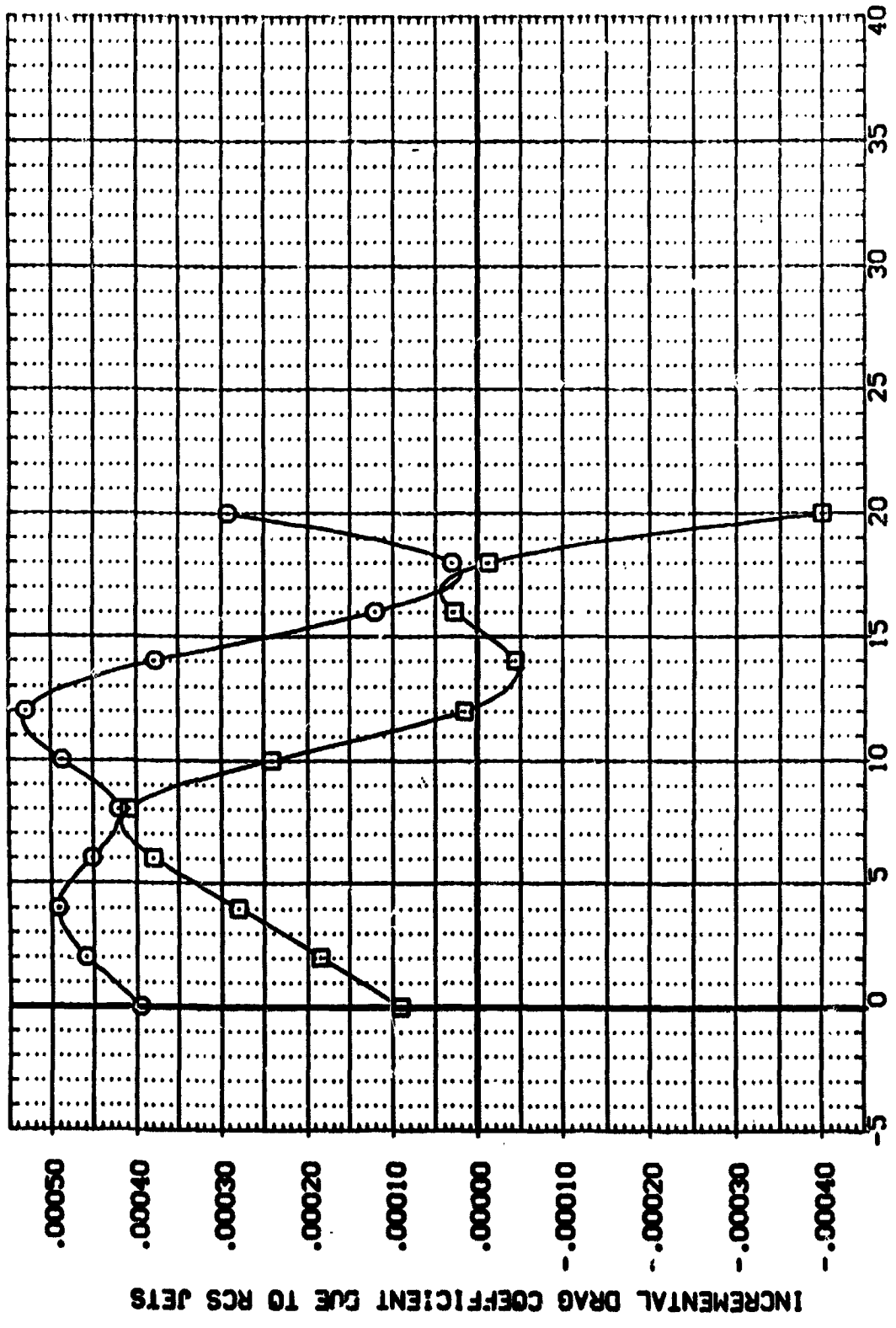


YAW JET INTERFERENCE (INCREMENTAL DATA). EFFECT OF SIDESLIP ANGLE

(A)MACH = 2.50




DATA SET SYMBOL: (AP018) □  
CONFIGURATION DESCRIPTION: MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF: BVTNI  
MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF: BVTNI  
BETA: DLP0-Y RVAL  
.000 187.000 3.000  
-5.000 187.000 3.000  
REFERENCE INFORMATION:  
SREF: 7.7245 SQ.FT.  
LREF: 7.8828 INCHES  
BREF: 15.1152 INCHES  
XREF: 12.9510 INCHES  
YREF: 6.0000 INCHES  
ZREF: 6.0000 INCHES  
SCALE: .0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

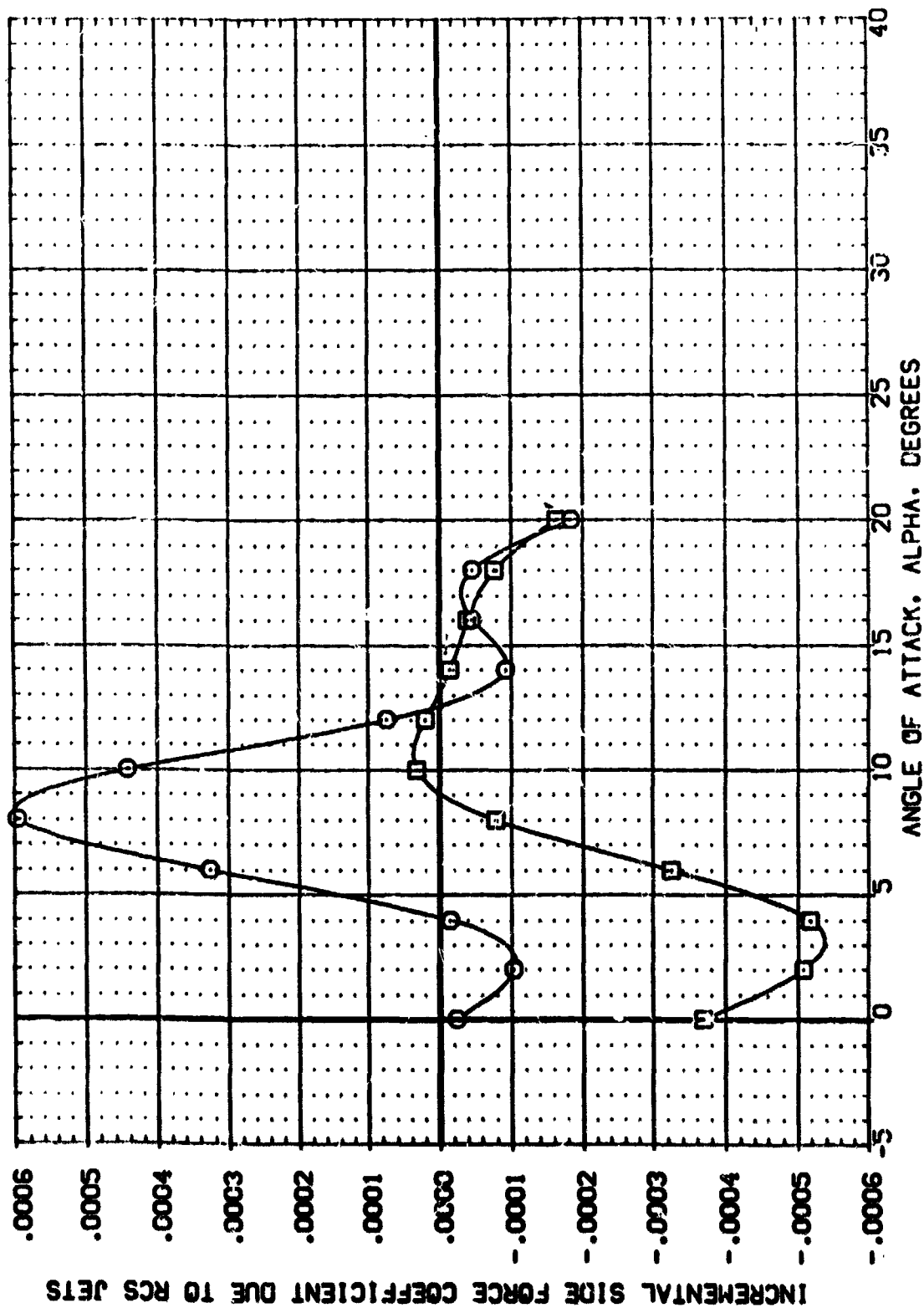
(M)MACH = 2.50



DATA SET SYMBOL: (AP018) (AP019)  CONFIGURATION DESCRIPTION: MA-7, JVT 1031, ROCKWELL PRR 088, CONF: BVTNI MA-7, JVT 1031, ROCKWELL PRR 088, CONF: BVTNI

BETA: 0.000 187.000 3.000  
-5.000 187.000 3.000

REFERENCE INFORMATION:  
SREF: 7245 50. FT.  
LREF: 7.8328 INCHES  
BREF: 15.1152 INCHES  
XREF: 12.6510 INCHES  
YREF: 6.0000 INCHES  
ZREF: 6.0000 INCHES  
SCALE: 1.0000



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

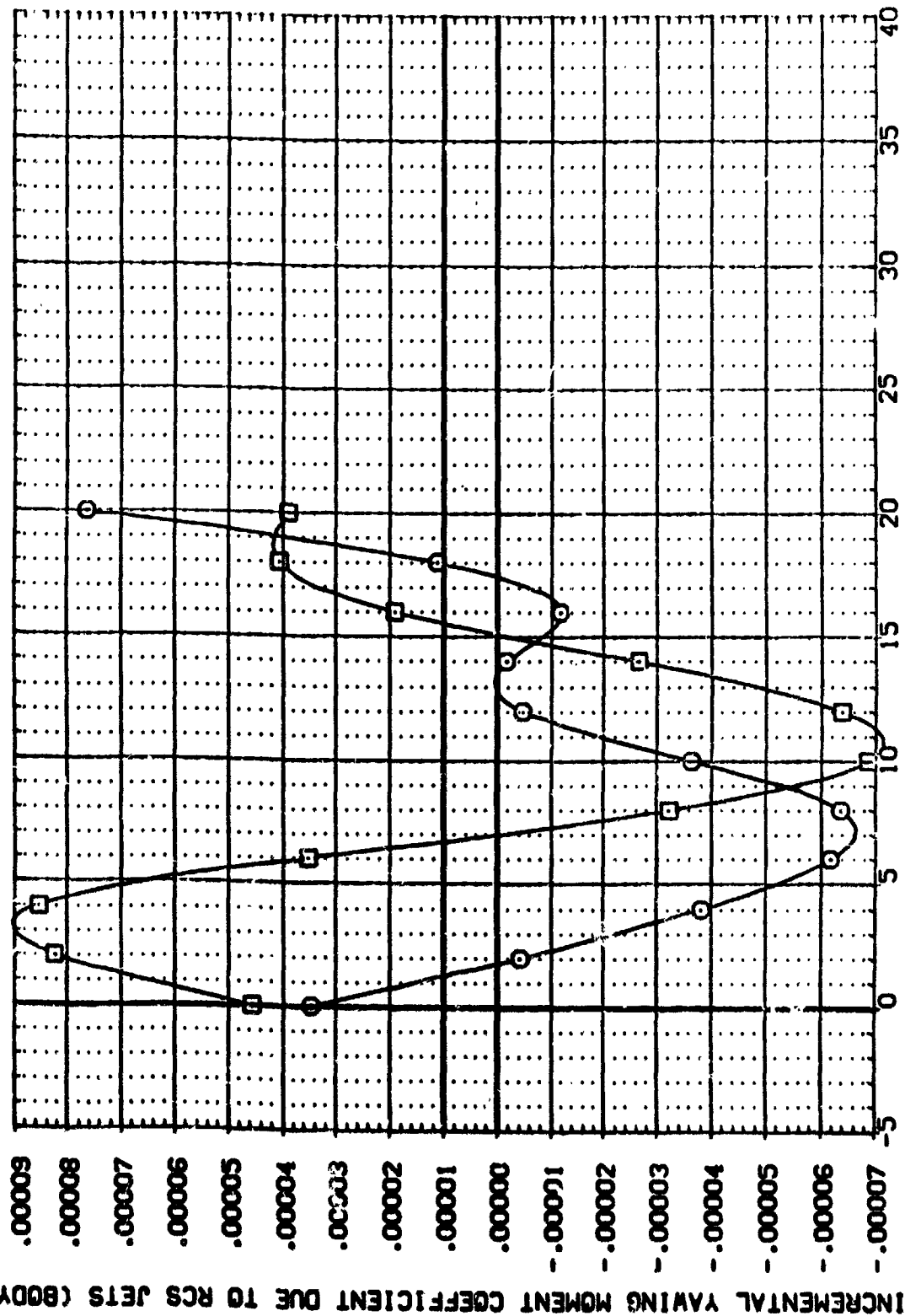
(A)MACH = 2.50

REFERENCE INFORMATION  
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 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XREF 12.9510 INCHES  
 YREF 6.0000 INCHES  
 ZREF 6.0000 INCHES  
 SCALE .0150

BETA DLP0-J RV/L  
 .000 187.000 3.000  
 -5.000 187.000 3.000

BVTHI  
 BVTHI

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AP018) MA-7.LPVT 1031.FCNVLL PRP CRB. CNF. BVTHI  
 (AP019) MA-7.LPVT 1031.FCNVLL PRP CRB. CNF. BVTHI



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 2.50

DATA SET SYMBOL (AP018) (AP019) □

CONFIGURATION DESCRIPTION MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF. BVTH MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF. BVTH

BETA DLP0-J RN/L

REFERENCE INFORMATION

SREF 7245 59.47

LREF 7.8228 10.45

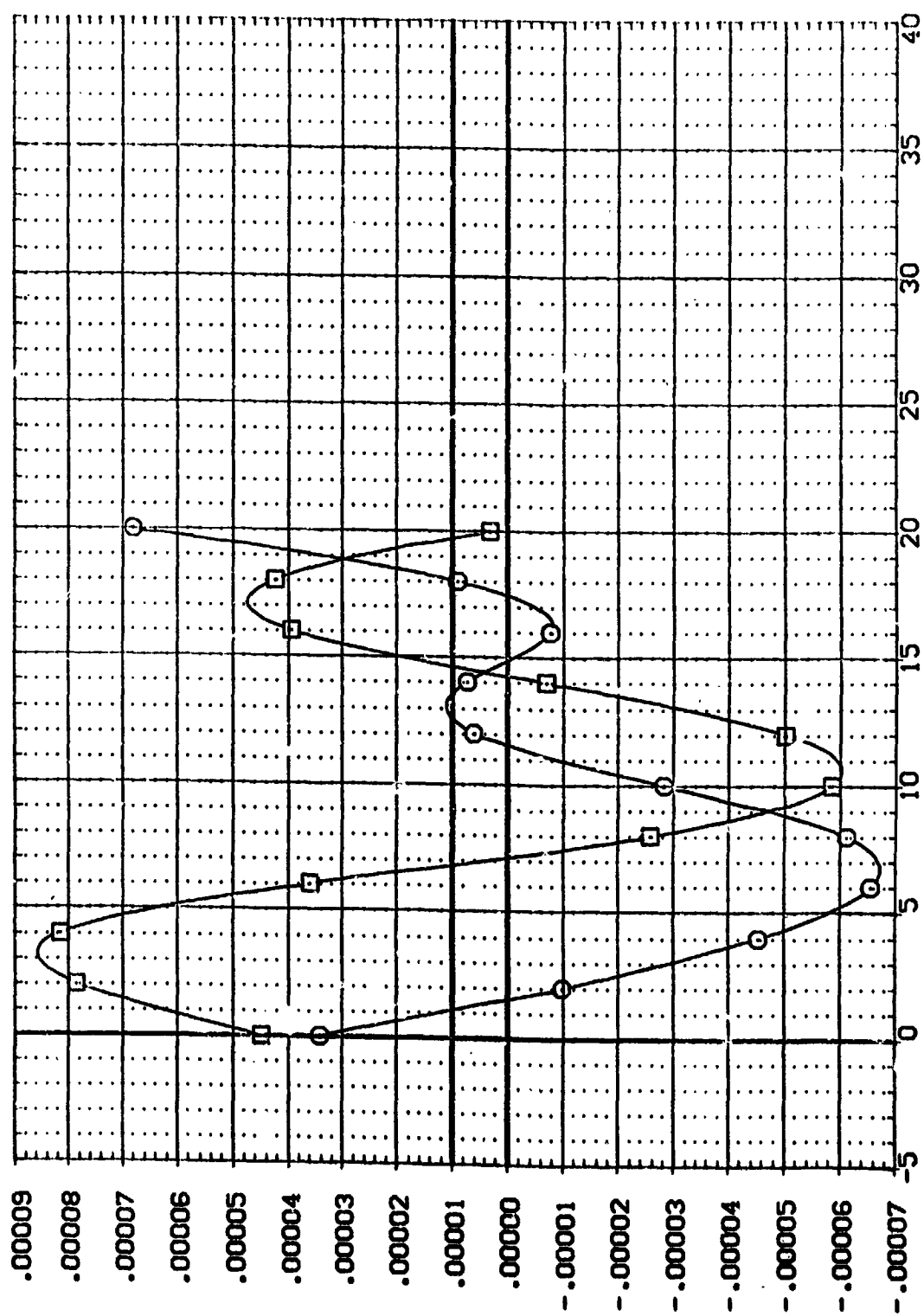
BREF 15.1152 10.45

YMRP 12.6510 10.45

ZMRP 6.0000 10.45

SCALE .01EC

INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (STABILITY AXIS)



ANGLE OF ATTACK, ALPHA, DEGREES

YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

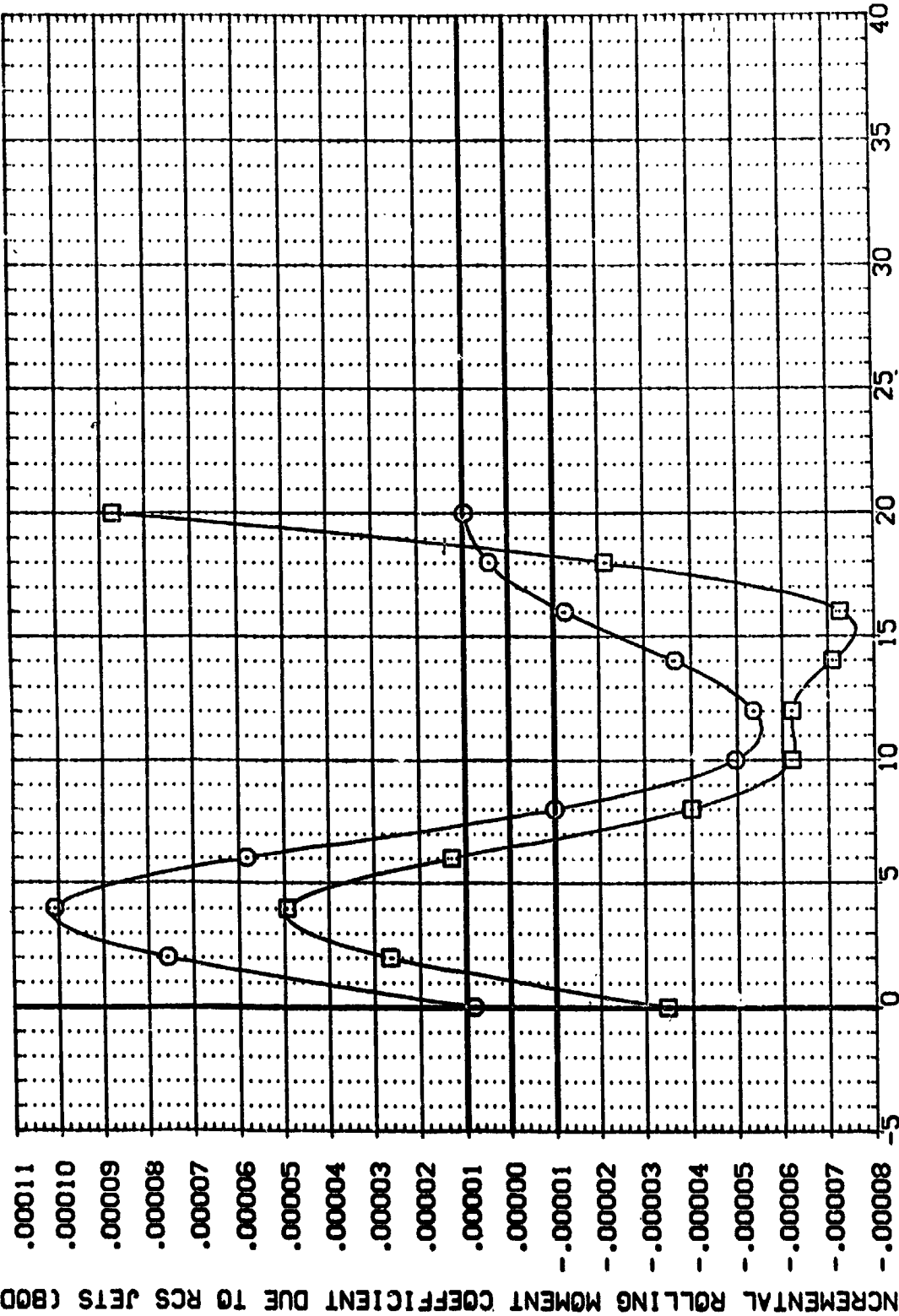
(MACH = 2.50



REFERENCE INFORMATION  
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 BREF 15.1152 INCHES  
 XMRP 12.9510 INCHES  
 YMRP .0000 INCHES  
 ZMRP 6.0000 INCHES  
 SCALE .0150

BETA DLPO-J RN/L  
 .000 187.000 3.000  
 -5.000 187.000 3.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (APMD18) MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTNI  
 (APMD19) MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTNI



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A) MACH = 2.50

REFERENCE INFORMATION  
 SREF 7245 SQ.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 YMRP 12.9510 INCHES  
 ZMRP 6.0000 INCHES  
 SCALE .0150

BETA DLPO-J RV/L  
 .000 187.000 3.000  
 -5.000 187.000 3.000

BVTN1  
 BVTN1

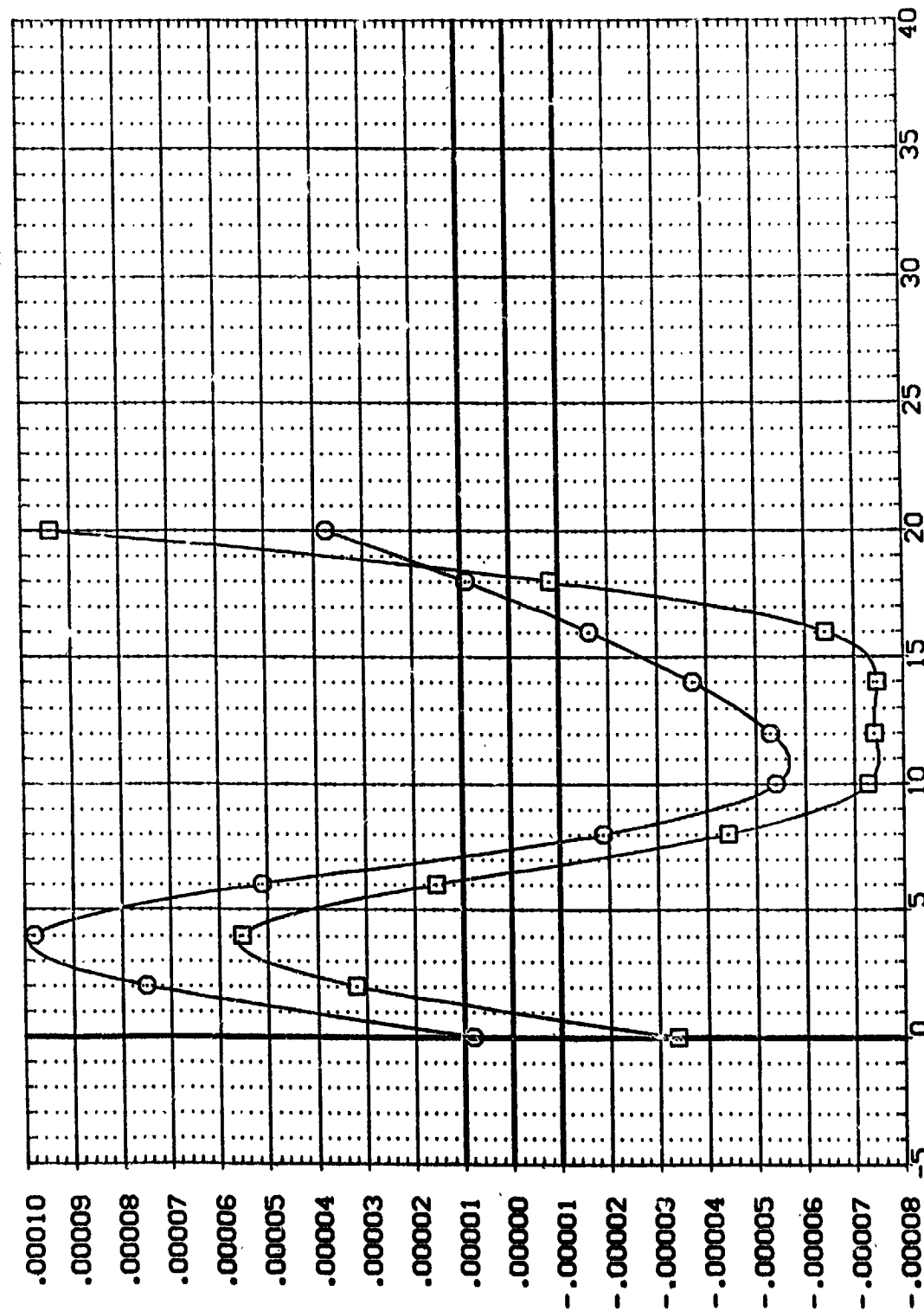
CONF. CONF.

DESCRIPTION

MA-7.UPT 1031.ROCKWELL PRR CRB.  
 MA-7.UPT 1031.ROCKWELL PRR CRB.

DATA SET SYMBOL  
 (APD18)  
 (APD19)

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS STABILITY AXIS



ANGLE OF ATTACK, ALPHA, DEGREES

YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 2.50

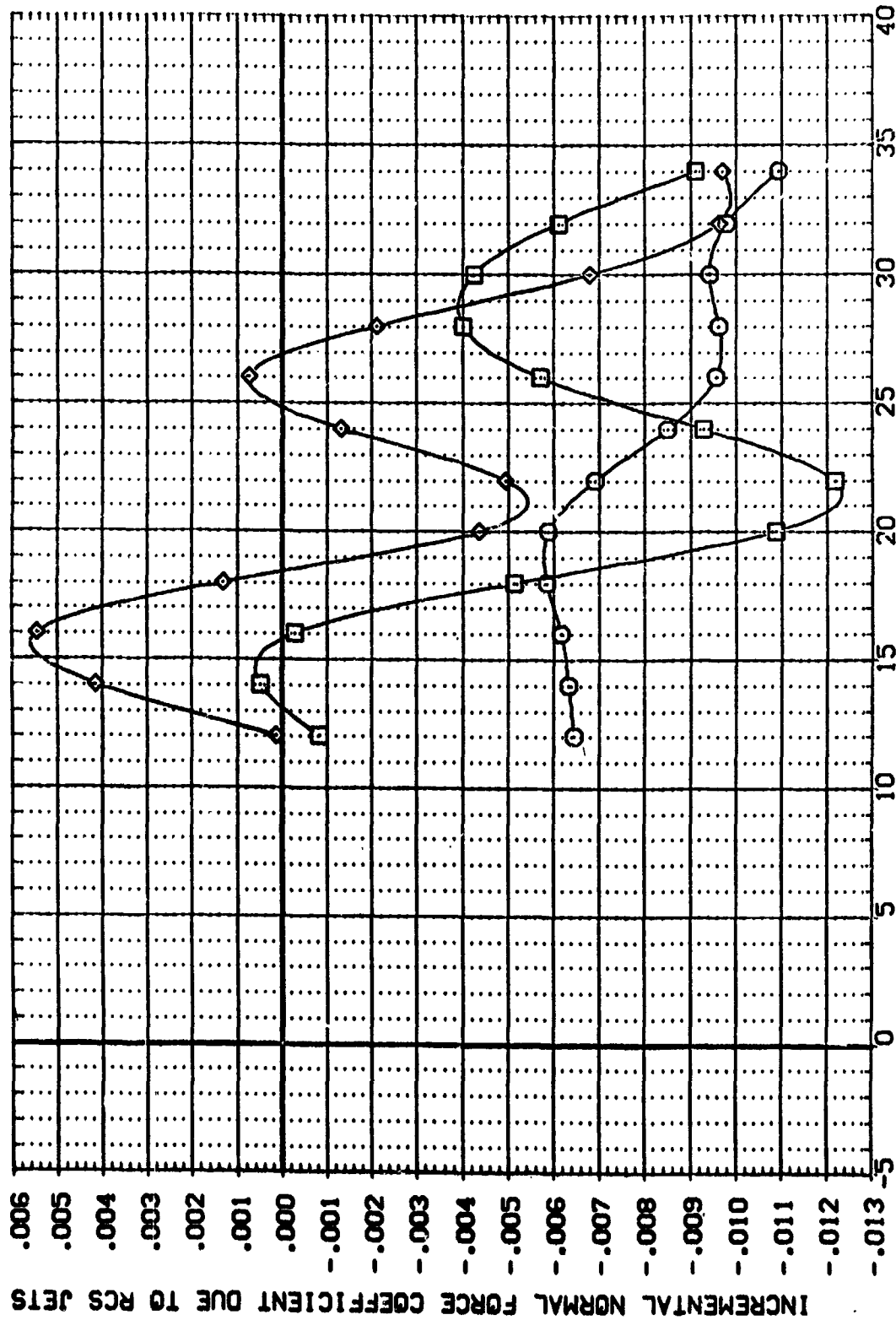


DATA SET SYMBOL      CONFIGURATION DESCRIPTION  
 (AP030)      MA-7, UPVT 1031, ROCKWELL      PRR      ORB      CONF.  
 (AP032)      MA-7, UPVT 1031, ROCKWELL      PRR      ORB      CONF.  
 (AP033)      MA-7, UPVT 1031, ROCKWELL      PRR      ORB      CONF.

BVTNI  
 BVTNI  
 BVTNI

BETA      DLPG-J      RV/L  
 .000      310.000      1.000  
 -2.500      310.000      1.000  
 -5.000      310.000      1.000

REFERENCE INFORMATION  
 SREF      .7245      SQ. FT.  
 LREF      7.6828      INCHES  
 BREF      15.1152      INCHES  
 XMRP      12.9510      INCHES  
 YMRP      .0000      INCHES  
 ZMRP      .0000      INCHES  
 SCALE      .0150



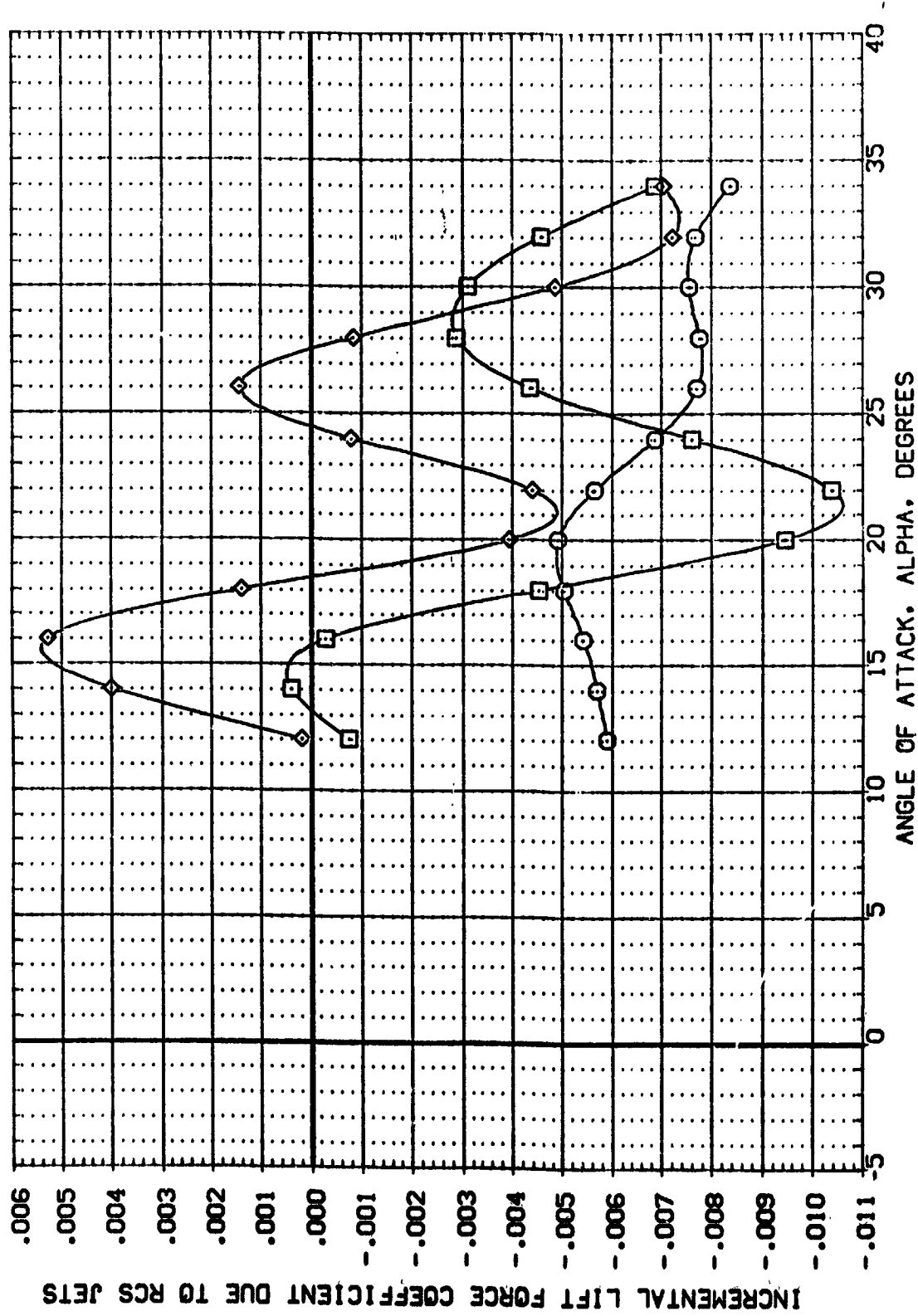
YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 4.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AP030) MA-7,LPVT 1031,ROCKVELL PRR CR8. CONF.  
 (AP032) MA-7,LPVT 1031,ROCKVELL PRR CR8. CONF.  
 (AP033) MA-7,LPVT 1031,ROCKVELL PRR CR8. CONF.

BETA DLPO-J RV/L  
 .000 310.000 1.000  
 -2.500 310.000 1.000  
 -5.000 310.000 1.000

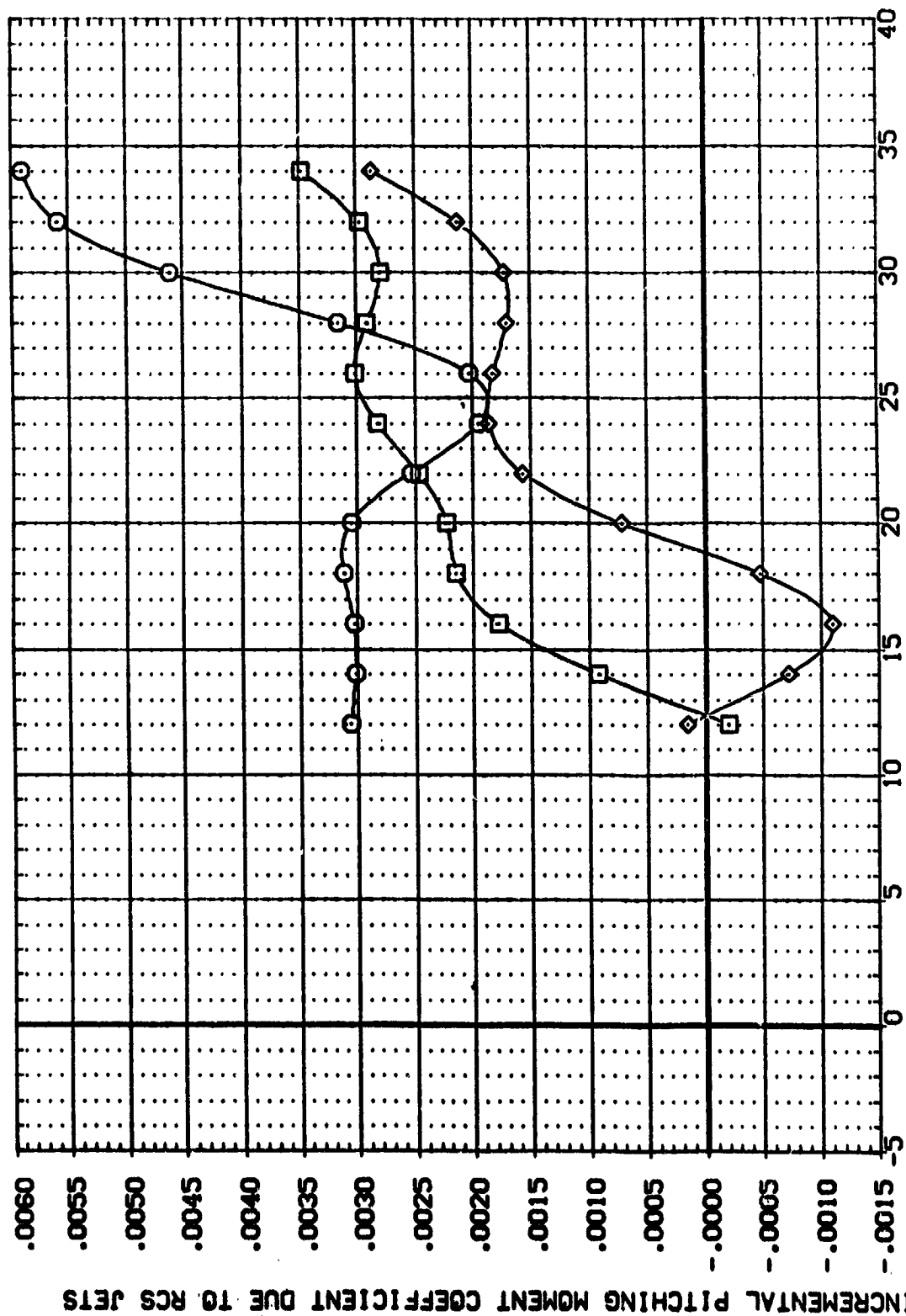
REFERENCE INFORMATION  
 SREF .7245 SQ.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XREF 12.9510 INCHES  
 YREF 1.0000 INCHES  
 ZREF 6.0000 INCHES  
 SCALE .0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A) MACH = 4.00

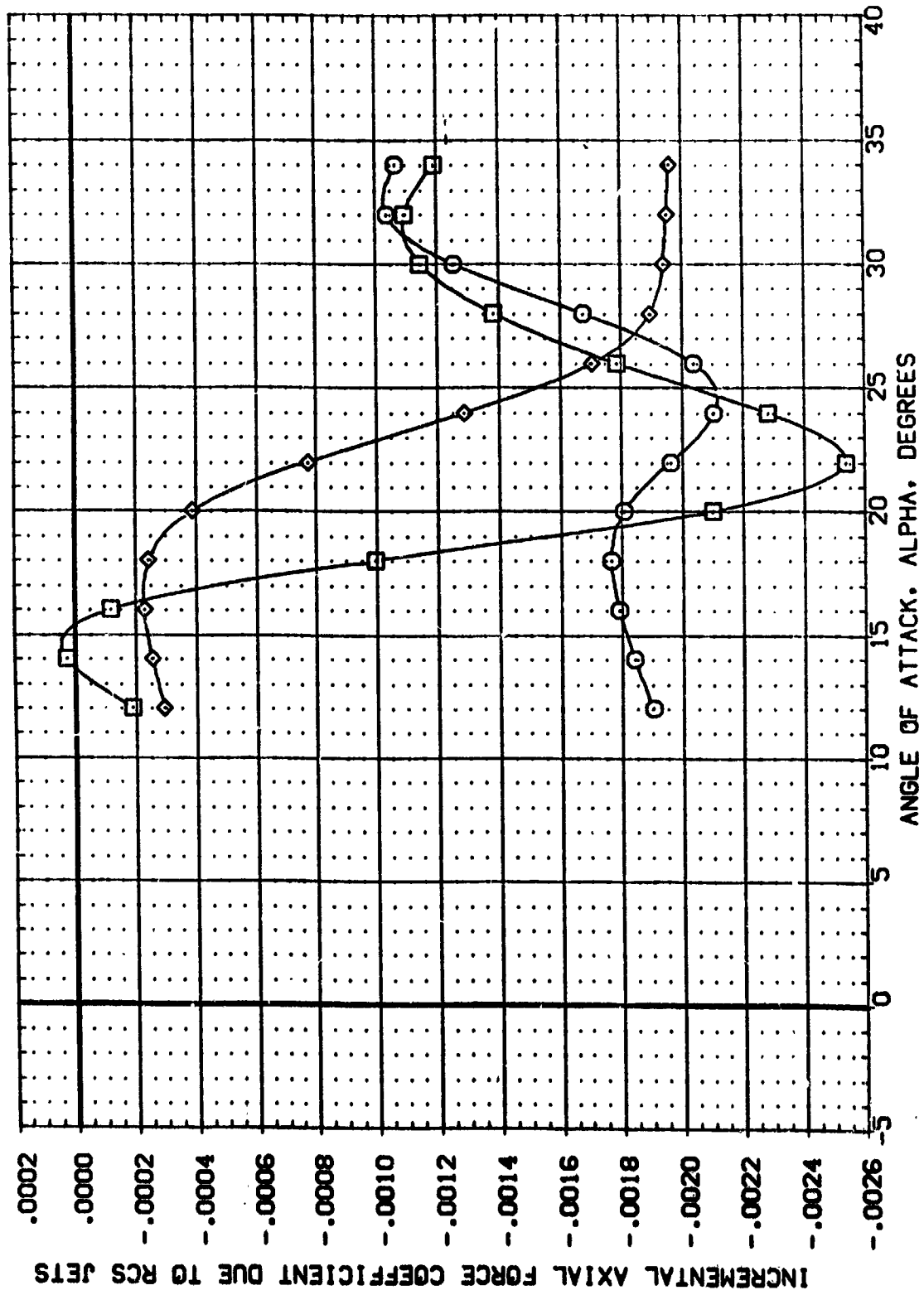
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	CLPO-J	RV/L	REFERENCE INFORMATION
(AP030)	MA-7-UPVT 1031-ROCKWELL PRR	.000	310.000	1.000	SREF .7245 SQ.FT.
(AP032)	MA-7-UPVT 1031-ROCKWELL PRR	-2.500	310.000	1.000	LREF 7.8828 INCHES
(AP033)	MA-7-UPVT 1031-ROCKWELL PRR	-5.000	310.000	1.000	BREF 15.1152 INCHES
					XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE



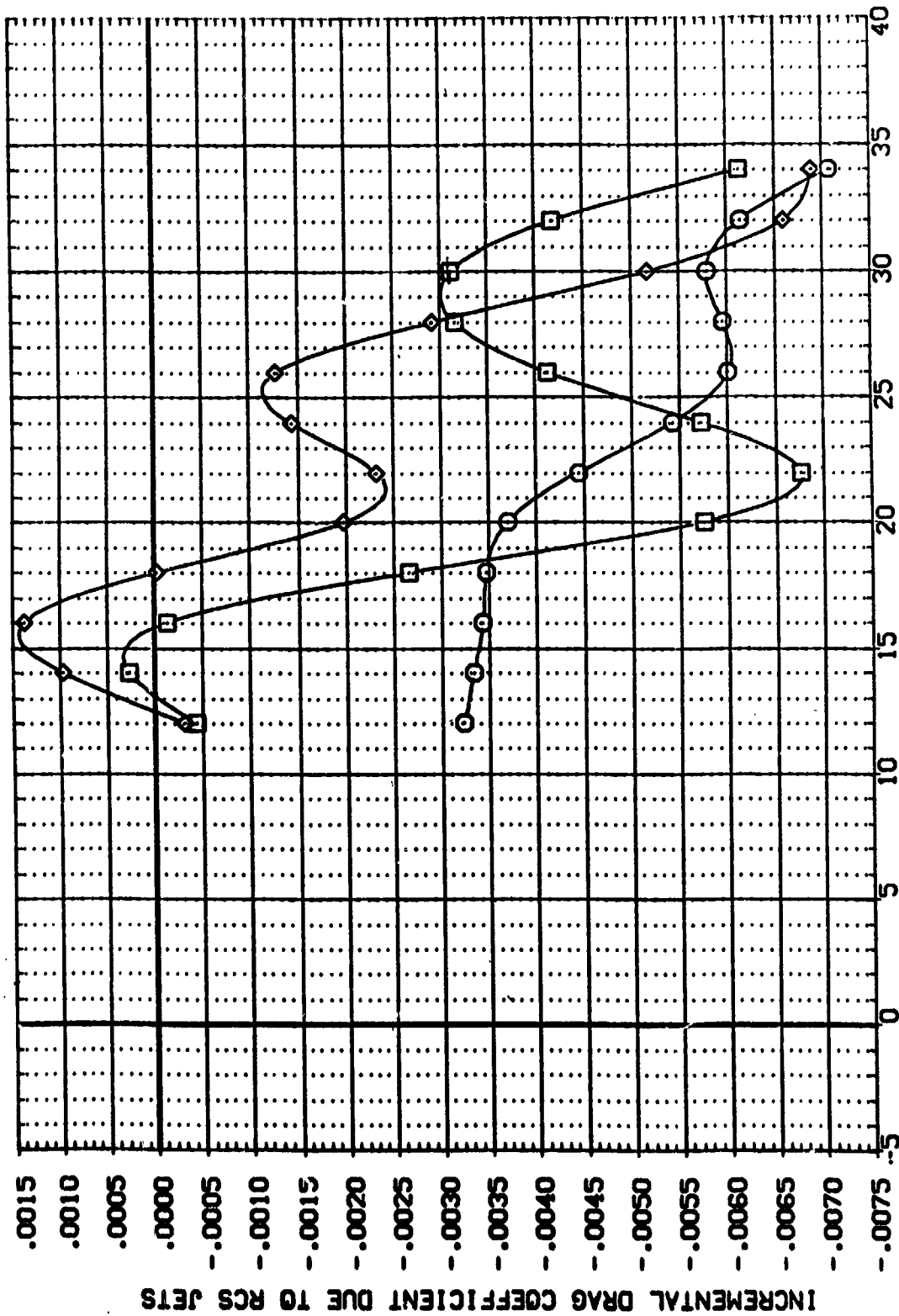
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(AP030)	MA-7.UPT 1031.ROCKWELL PRR DRB. CONF: BVTN1	.000	310.000	1.000	SREF 7245 SO.FT.
(AP032)	MA-7.UPT 1031.ROCKWELL PRR DRB. CONF: BVTN1	-2.500	310.000	1.000	LREF 7.8828 INCHES
(AP033)	MA-7.UPT 1031.ROCKWELL PRR DRB. CONF: BVTN1	-5.000	310.000	1.000	BREF 15.1152 INCHES
					XMFP 12.9510 INCHES
					YMFP .0000 INCHES
					ZMFP .0150 INCHES
					SCALE



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(M)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(AP030)	MA-7,UPVT 1031,ROCKWELL PRR CR8, CONF: BVTNI	.000	310.000	1.000	SREF .7245 SQ.FT.
(AP032)	MA-7,UPVT 1031,ROCKWELL PRR CR8, CONF: BVTNI	-2.500	310.000	1.000	LREF 7.9828 INCHES
(AP033)	MA-7,UPVT 1031,ROCKWELL PRR CR8, CONF: BVTNI	-5.000	310.000	1.000	BREF 15.1152 INCHES
					YPRP 12.9510 INCHES
					ZPRP .0000 INCHES
					SCALE .0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 4.00

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    BVTNI    CONF.    CONF.    DLPO-J    RP/L

(AP030)    MA-7,UPVT 1031,ROCKWELL PRR CR3, CONF.    BVTNI    CONF.    CONF.    DLPO-J    RP/L

(AP032)    MA-7,UPVT 1031,ROCKWELL PRR CR3, CONF.    BVTNI    CONF.    CONF.    DLPO-J    RP/L

(AP033)    MA-7,UPVT 1031,ROCKWELL PRR CR3, CONF.    BVTNI    CONF.    CONF.    DLPO-J    RP/L

REFERENCE INFORMATION

SQ.FT.    7245

INCHES    7.8828

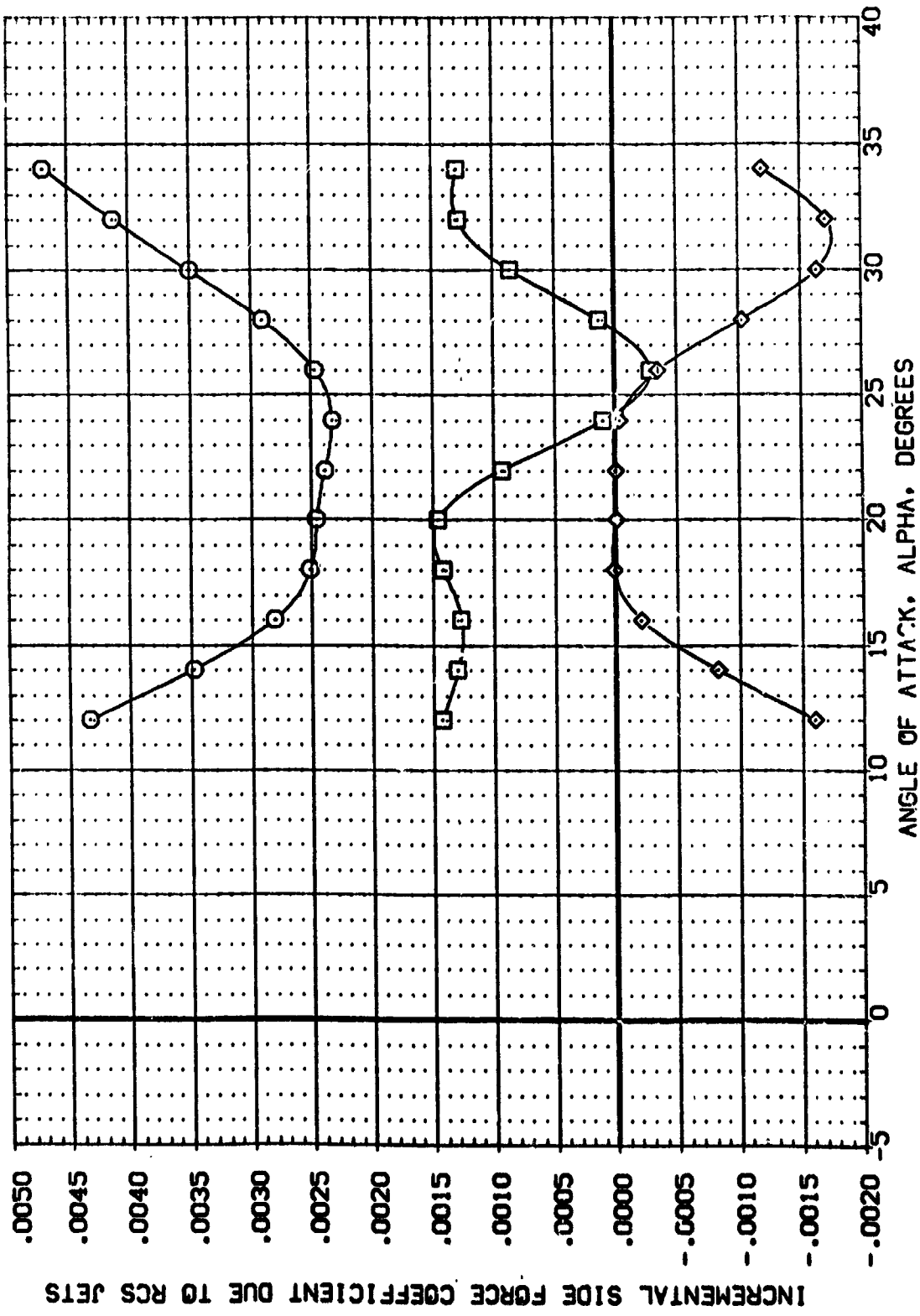
INCHES    15.1152

INCHES    12.9510

INCHES    6.0000

INCHES    6.0000

SCALE    .0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

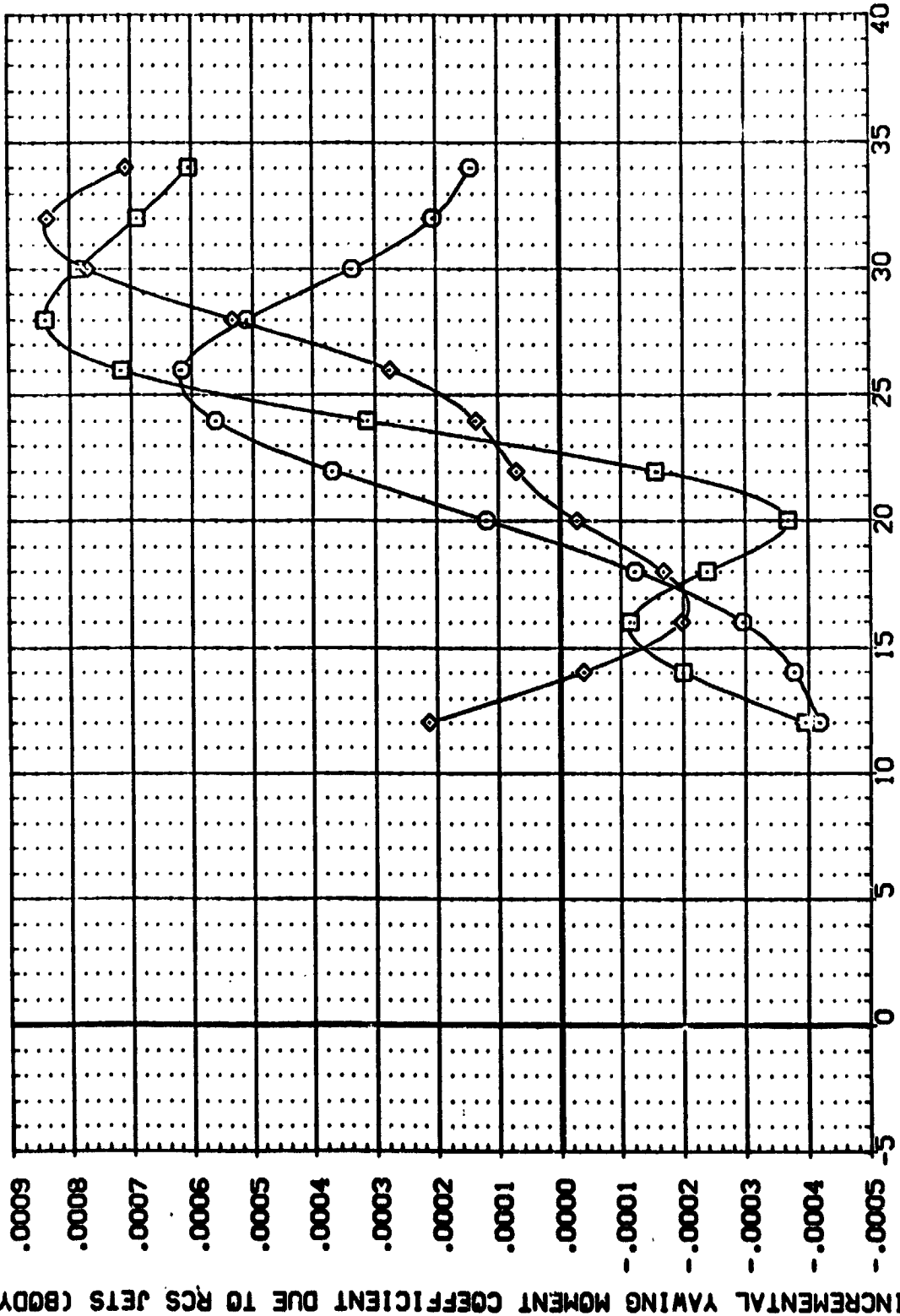
(A)MACH = 4.00



DATA SET SYMBOL: (APR030) MA-7.UPT 1031.ROCKWELL PRR ORB: CONF: BVTNI: BVTNI: BVTNI:  
(APR032) MA-7.UPT 1031.ROCKWELL PRR ORB: CONF: BVTNI: BVTNI: BVTNI:  
(APR033) MA-7.UPT 1031.ROCKWELL PRR ORB: CONF: BVTNI: BVTNI: BVTNI:

REFERENCE INFORMATION:  
SREF: .7245 SQ.FT.  
LREF: 7.8828 INCHES  
BREF: 15.1152 INCHES  
XREF: 12.9510 INCHES  
YREF: .0000 INCHES  
ZREF: 6.0000 INCHES  
SCALE: .0150

BETA: DLPO-J RV/L  
.000 310.000 1.000  
-2.500 310.000 1.000  
-5.000 310.000 1.000



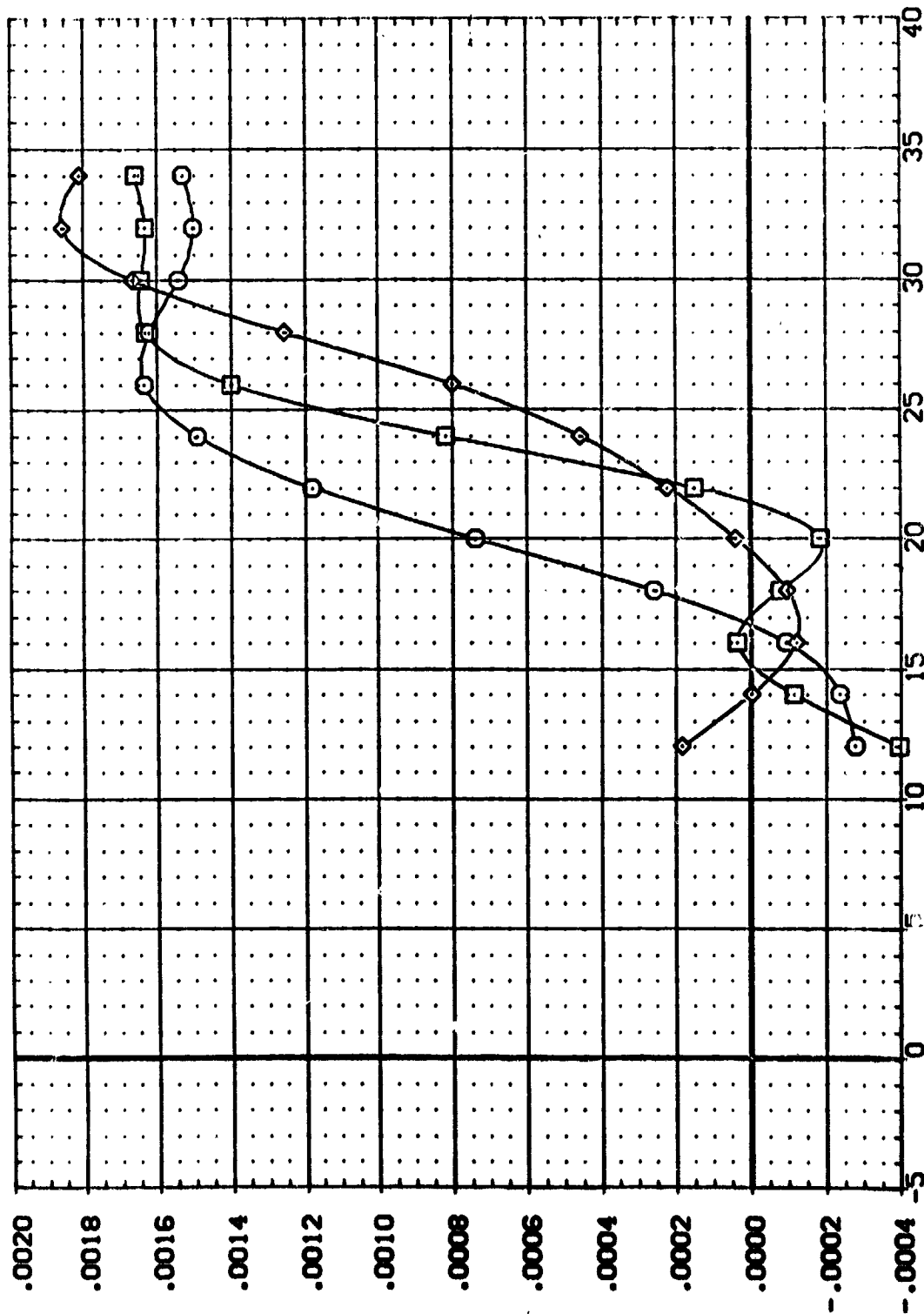
YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A) MACH = 4.00

DATA SET SYMBOL: (AP030) MA-7. UPVT 1031. ROCKVELL PRR ORB. CONF. BV(TN) MA-7. UPVT 1031. ROCKVELL PRR ORB. CONF. BV(TN) (AP032) MA-7. UPVT 1031. ROCKVELL PRR ORB. CONF. BV(TN) (AP033) MA-7. UPVT 1031. ROCKVELL PRR ORB. CONF. BV(TN)

BETA: 0.000 310.000 1.000 0.000 310.000 1.000 -2.500 310.000 1.000 -5.000 310.000 1.000

REFERENCE INFORMATION: SREF 7245 SC.ET. 7.6328 NC.ES. 15.1152 NC.ES. 12.9510 NC.ES. 6.0000 NC.ES. 6.0000 NC.ES. 0.0150 SCALE



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A) MACH = 4.00



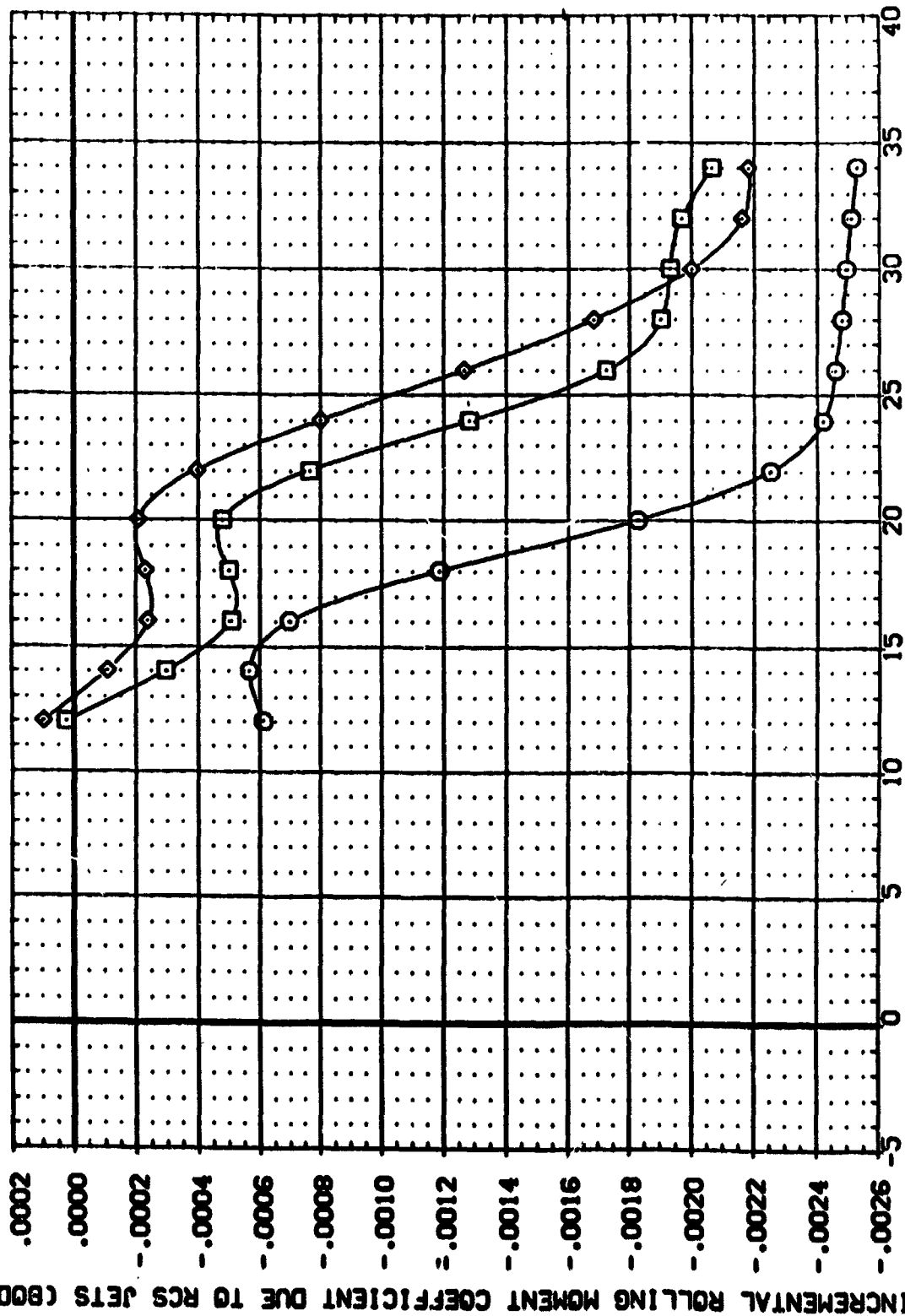
DATA SET SYMBOL: (APC030) (APC032) (APC033)

CONFIGURATION DESCRIPTION: MA-7, UPVT 1031, ROCKWELL PRR CDB: CONF: BVTNI MA-7, UPVT 1031, ROCKWELL PRR CDB: CONF: BVTNI MA-7, UPVT 1031, ROCKWELL PRR CDB: CONF: BVTNI

BETA: .000 310.000 1.000 -2.500 310.000 1.000

DLPO-J: .000 310.000 1.000 -2.500 310.000 1.000

REFERENCE INFORMATION: SREF: 7245 50. FT. LREF: 7.8828 INCHES BREF: 15.1152 INCHES XREF: 12.9510 INCHES YREF: 6.0000 INCHES ZREF: 6.0000 INCHES SCALE: .0150



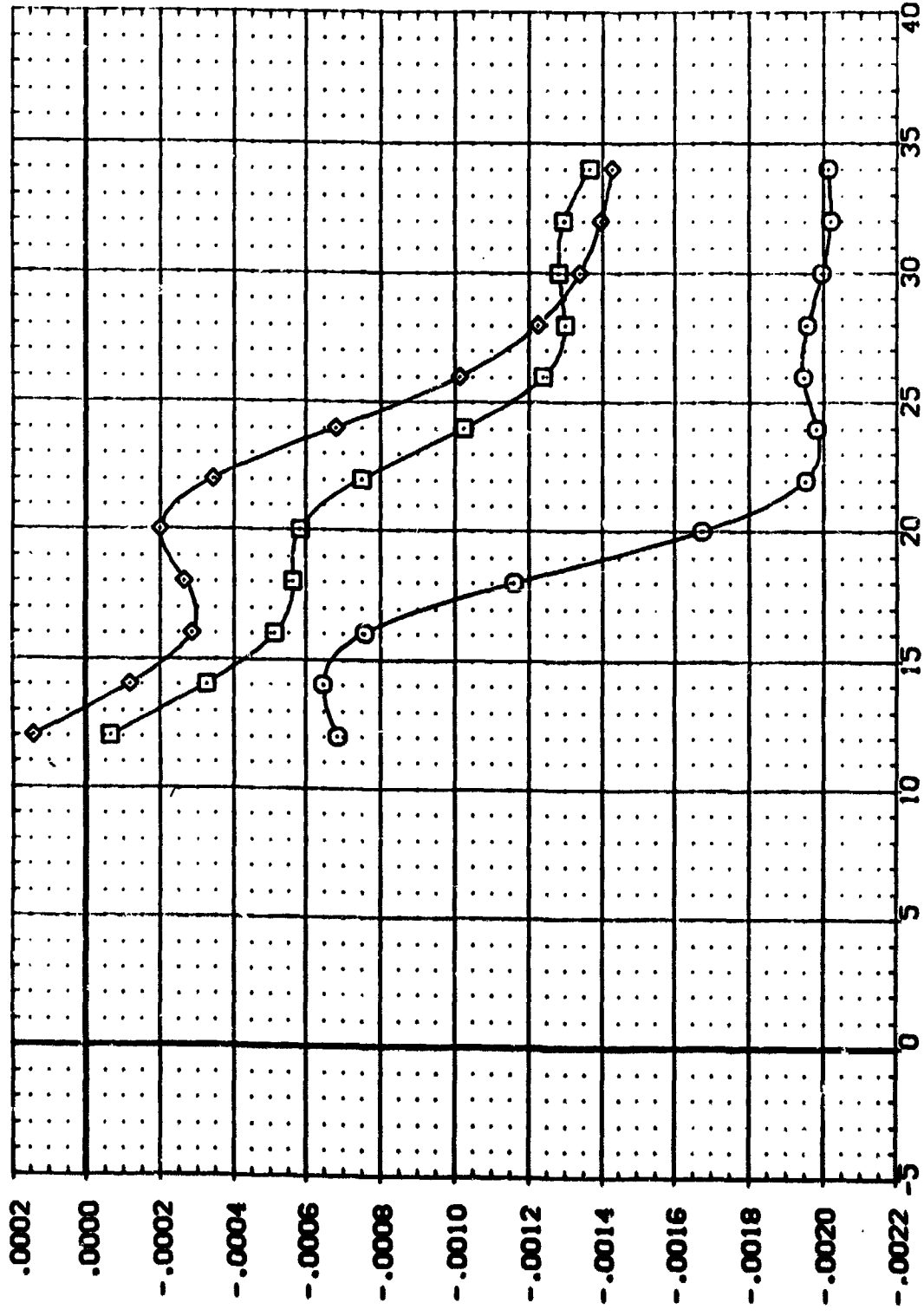
YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE  
(A)MACH = 4.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (APR030) NA-7-LPVT 1031-ROCKWELL PRR CDB: CONF: BV(TNI)  
 (APR032) NA-7-LPVT 1031-ROCKWELL PRR CDB: CONF: BV(TNI)  
 (APR033) NA-7-LPVT 1031-ROCKWELL PRR CDB: CONF: BV(TNI)

BETA DLPO-J RV/L  
 .000 310.000 1.000  
 -2.500 310.000 1.000  
 -5.000 310.000 1.000

REFERENCE INFORMATION  
 SREF .7245 50. FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 X-PRP 12.9510 INCHES  
 Y-PRP .0000 INCHES  
 Z-PRP 6.0000 INCHES  
 SCALE .0150

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS STABILITY AXIS



ANGLE OF ATTACK, ALPHA, DEGREES  
 YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 4.00

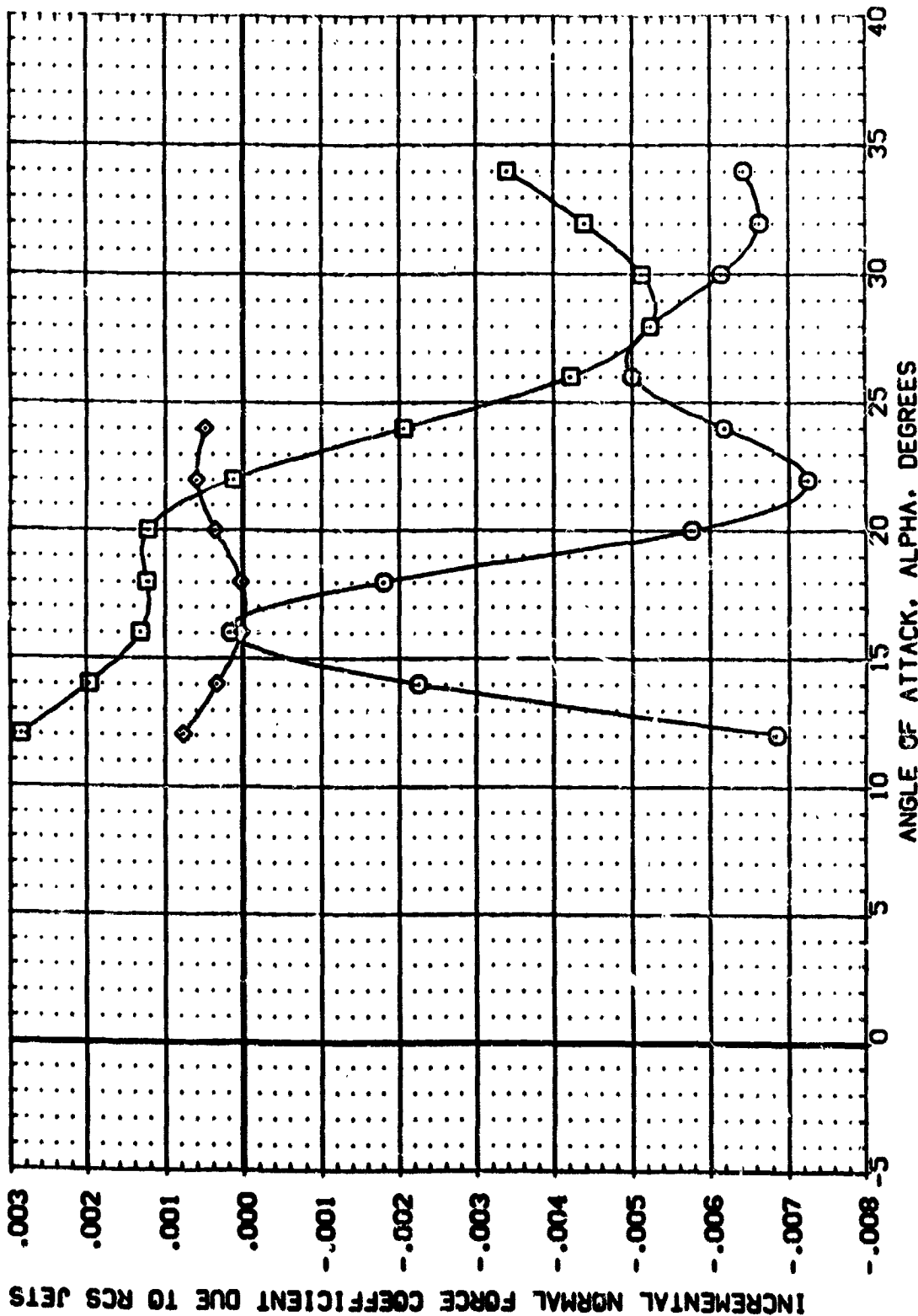
DATA SET SYMBOL: (AP026) (AP027) (AP028)

CONFIGURATION DESCRIPTION: MA-7, UPVT 1031, ROCKWELL PER 088; MA-7, UPVT 1031, ROCKWELL PER 088; MA-7, UPVT 1031, ROCKWELL PER 088

CONF: CONF: CONF:

BETA: .000 .000 .000; DLPO-J: 35.000 100.000 170.000; RV/L: 1.000 3.000 5.000

REFERENCE INFORMATION: SREF: .7245 SQ. FT.; LREF: 7.8828 INCHES; BREF: 15.1152 INCHES; XTRP: 12.5510 INCHES; YTRP: .0000 INCHES; ZTRP: 6.0000 INCHES; SCALE: .0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF REYNOLDS NUMBER

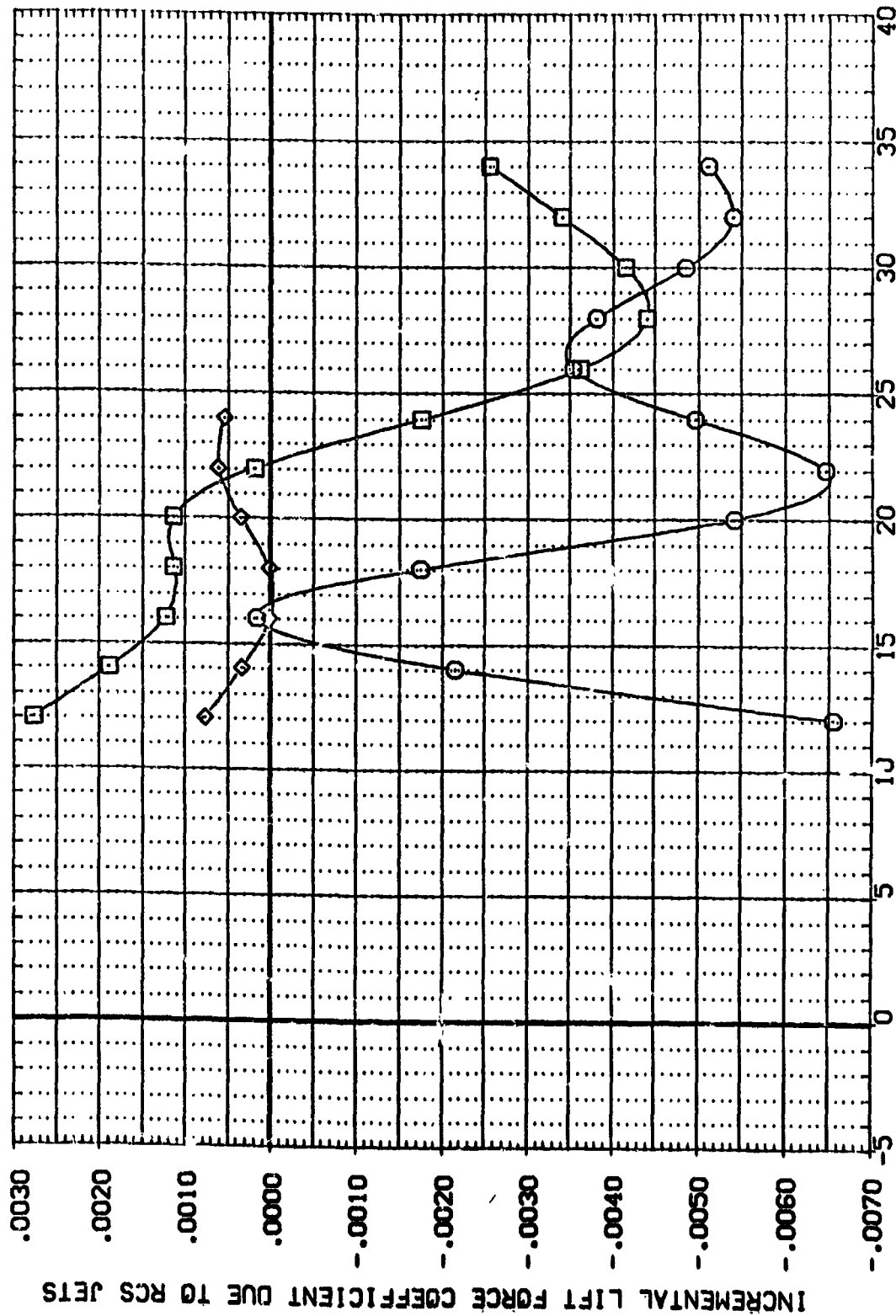
(A)MACH = 4.00



DATA SET SYMBOL: CONFIGURATION DESCRIPTION  
 (APR026) MA-7, UPVT 1031, ROCKWELL PRR C8B, CONF.  
 (APR027) MA-7, UPVT 1031, ROCKWELL PRR C8B, CONF.  
 (APR028) MA-7, UPVT 1031, ROCKWELL PRR C8B, CONF.

BETA DLP0-J RNL  
 .000 35.000 1.000  
 .000 100.000 3.000  
 .000 170.000 5.000

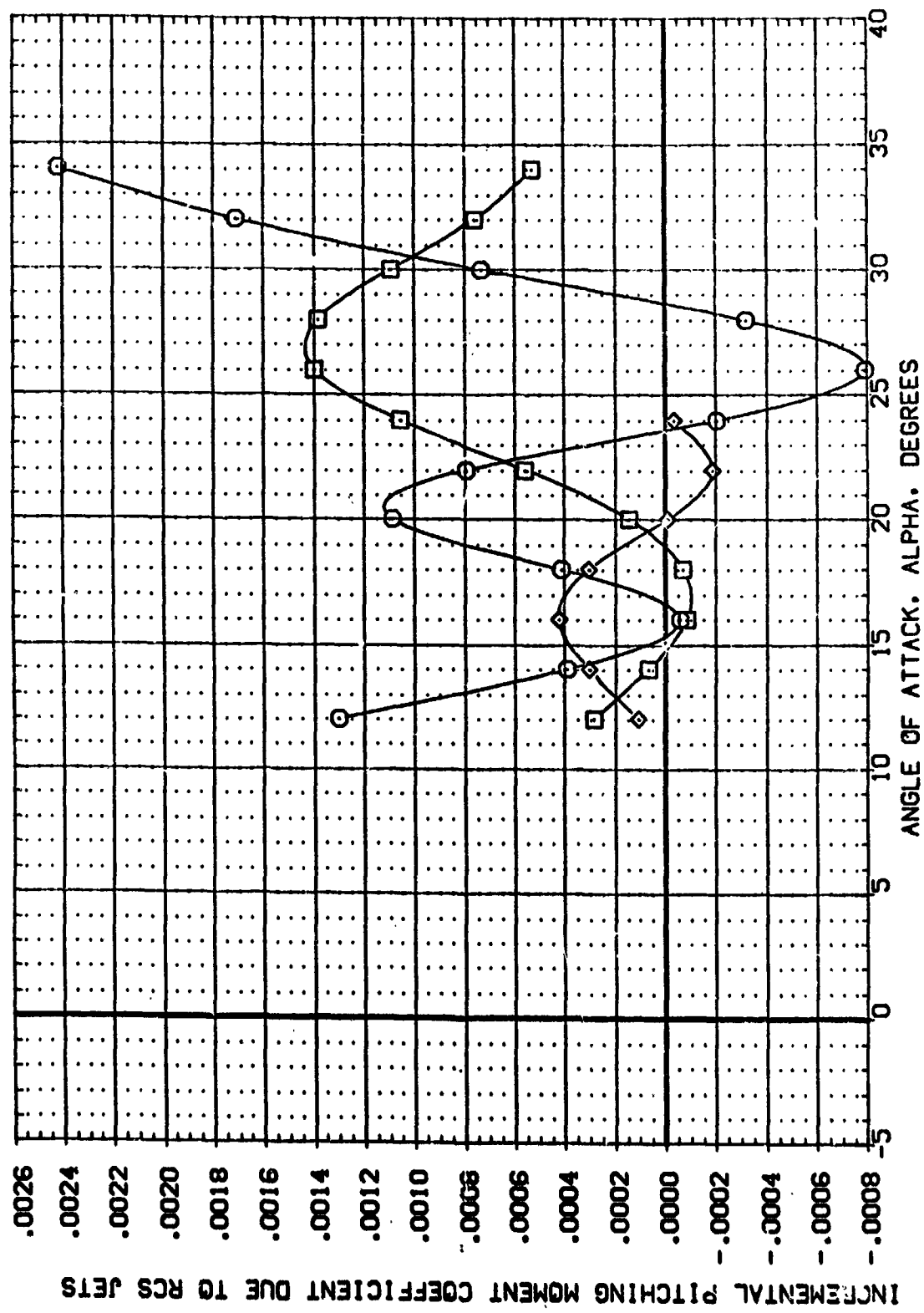
REFERENCE INFORMATION  
 SREF .7245 SQ. FT.  
 LREF 7.8928 INCHES  
 BREF 15.1152 INCHES  
 XGRP 12.9510 INCHES  
 YGRP .0000 INCHES  
 ZGRP 6.0000 INCHES  
 SCALE .0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF REYNOLDS NUMBER  
 ANGLE OF ATTACK, ALPHA, DEGREES

-(A)MACH = 4.00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA		DLPO-J		RV/L		REFERENCE INFORMATION	
(APR026)	MA-7-UPVT	1031-ROCKWELL	PRR	CRB	.000	35.000	1.000	SREF	.7245	50. FT.	
(APR027)	MA-7-UPVT	1031-ROCKWELL	PRR	CRB	.000	100.000	3.000	LREF	7.8828	INCHES	
(APR028)	MA-7-UPVT	1031-ROCKWELL	PRR	CRB	.000	170.000	5.000	BREF	15.1152	INCHES	
								XREF	12.9510	INCHES	
								YREF	.0000	INCHES	
								ZREF	6.0000	INCHES	
								SCALE	.0150		



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF REYNOLDS NUMBER

(AJMACH = 4.00

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(AP026)    MA-7-UPVT 1031, ROCKWELL PRR CRB: CONF: BVINI

(AP027)    MA-7-UPVT 1031, ROCKWELL PRR CRB: CONF: BVINI

(AP028)    MA-7-UPVT 1031, ROCKWELL PRR CRB: CONF: BVINI

BETA    DLPO-J    RN/L

.000    35.000    1.000

.000    100.000    3.000

.000    170.000    5.000

REFERENCE INFORMATION

SREF    .7245    SQ.FT.

LREF    7.8328    INCHES

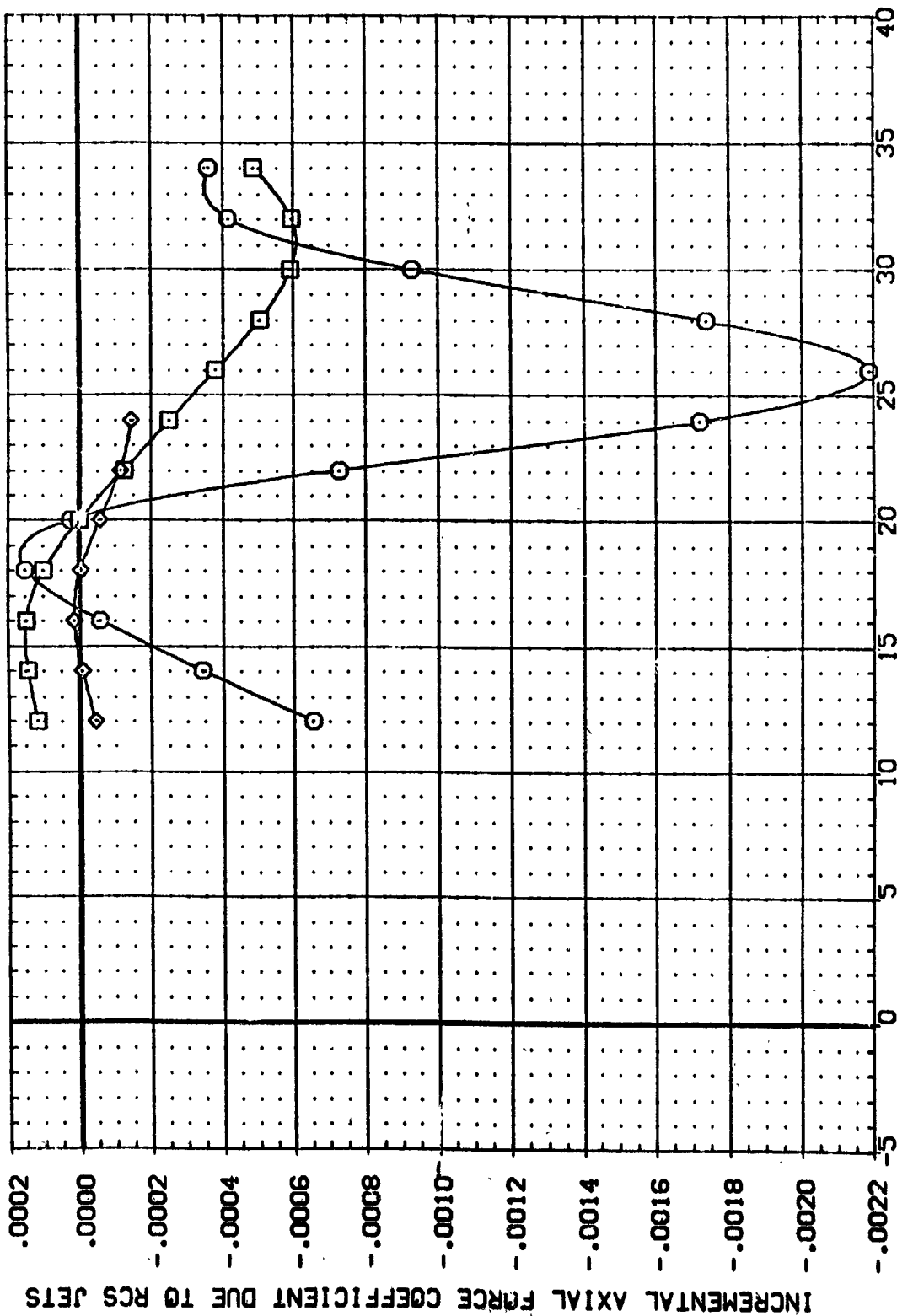
BREF    15.1152    INCHES

XWRP    12.9510    INCHES

YWRP    .0000    INCHES

ZWRP    6.0000    INCHES

SCALE    .0150



ANGLE OF ATTACK, ALPHA, DEGREES

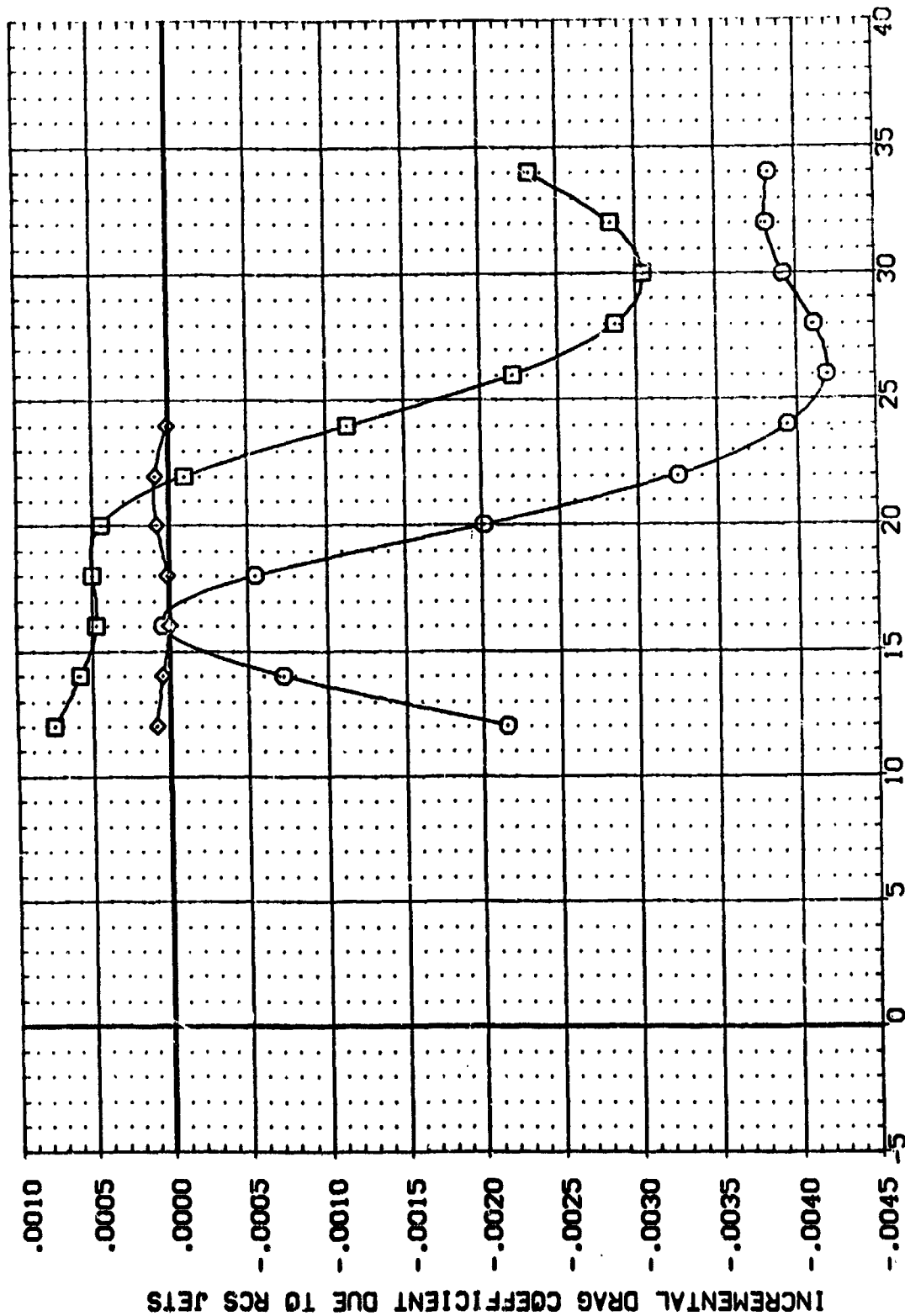
YAW-JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00

DATA SET SYMBOL: (A7026) MA-7-UPVT 1031-ROCKWELL PRR DRB. CONF. BVTNI  
 (A7027) MA-7-UPVT 1031-ROCKWELL PRR DRB. CONF. BVTNI  
 (A7028) MA-7-UPVT 1031-ROCKWELL PRR DRB. CONF. BVTNI

REFERENCE INFORMATION:  
 SREF: 7245 SC.FT.  
 LREF: 7.6628 INCHES  
 BREF: 15.1152 INCHES  
 XPRP: 12.5510 INCHES  
 YPRP: .0000 INCHES  
 ZPRP: 6.0000 INCHES  
 SCALE: .0150

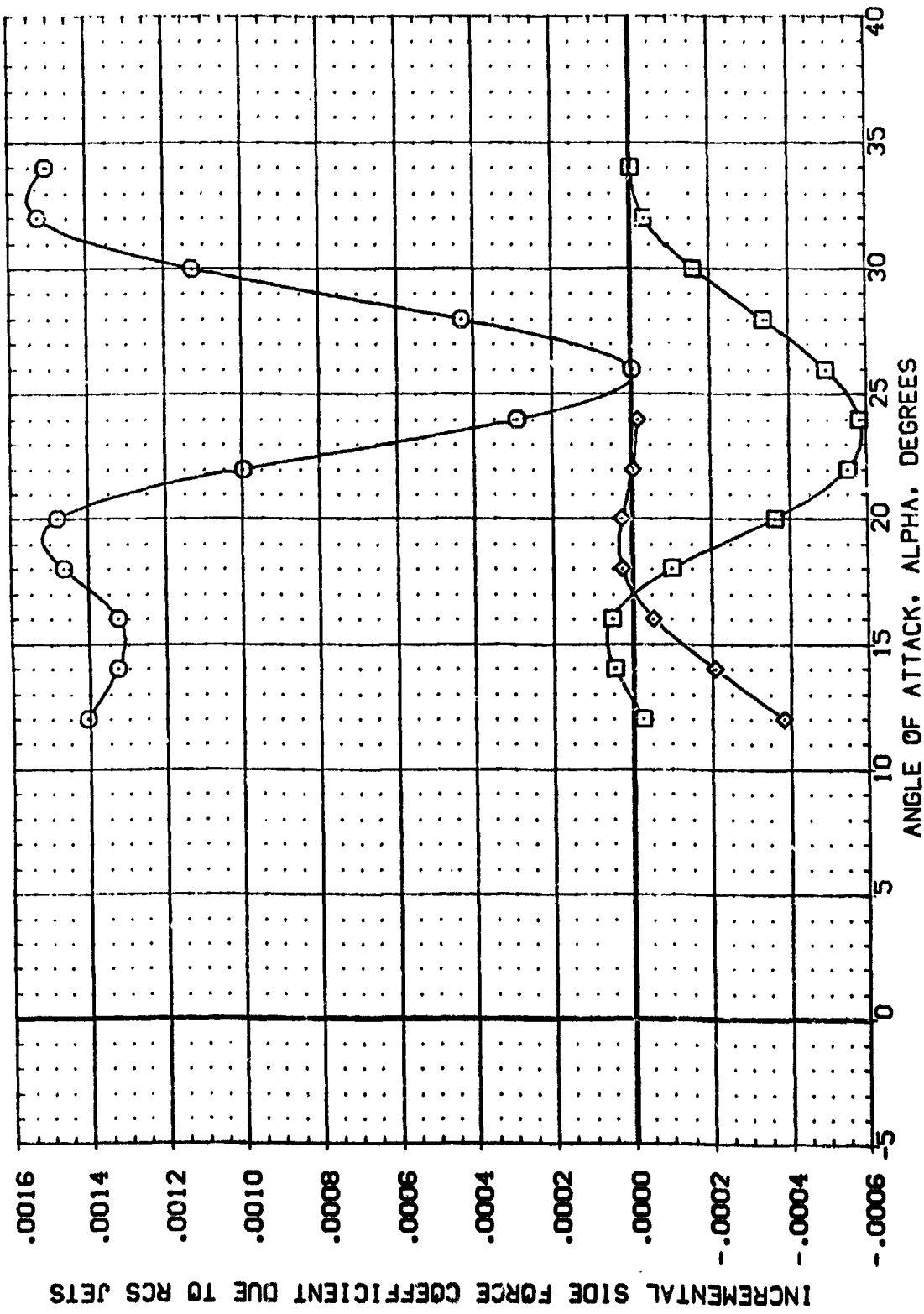
BETA: .000 DLP0-J: 35.000 RVL: 1.000  
 .000 100.000 3.000  
 .000 170.000 5.000



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(AP026)	MA-7-LPVT 1031-ROCKWELL PRR DR8: CONF.	.000	35.000	1.000	SREF 7245 SC.FT.
(AP027)	MA-7-LPVT 1031-ROCKWELL PRR DR8: CONF.	.000	100.000	3.000	LREF 7.6828 INCHES
(AP028)	MA-7-LPVT 1031-ROCKWELL PRR DR8: CONF.	.000	170.000	5.000	BREF 15.1152 INCHES
					XPRP 12.9510 INCHES
					YPRP .0000 INCHES
					ZPRP 6.0000 INCHES
					SCALE .0150



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF REYNOLDS NUMBER  
 (A)MACH = 4.00

REFERENCE INFORMATION  
 SREF 7245 50. FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XREF 12.9510 INCHES  
 YREF .0000 INCHES  
 ZREF 6.0000 INCHES  
 SCALE .0150

BETA DLP3-J RNVL  
 .000 35.000 1.000  
 .000 100.000 3.000  
 .000 170.000 5.000

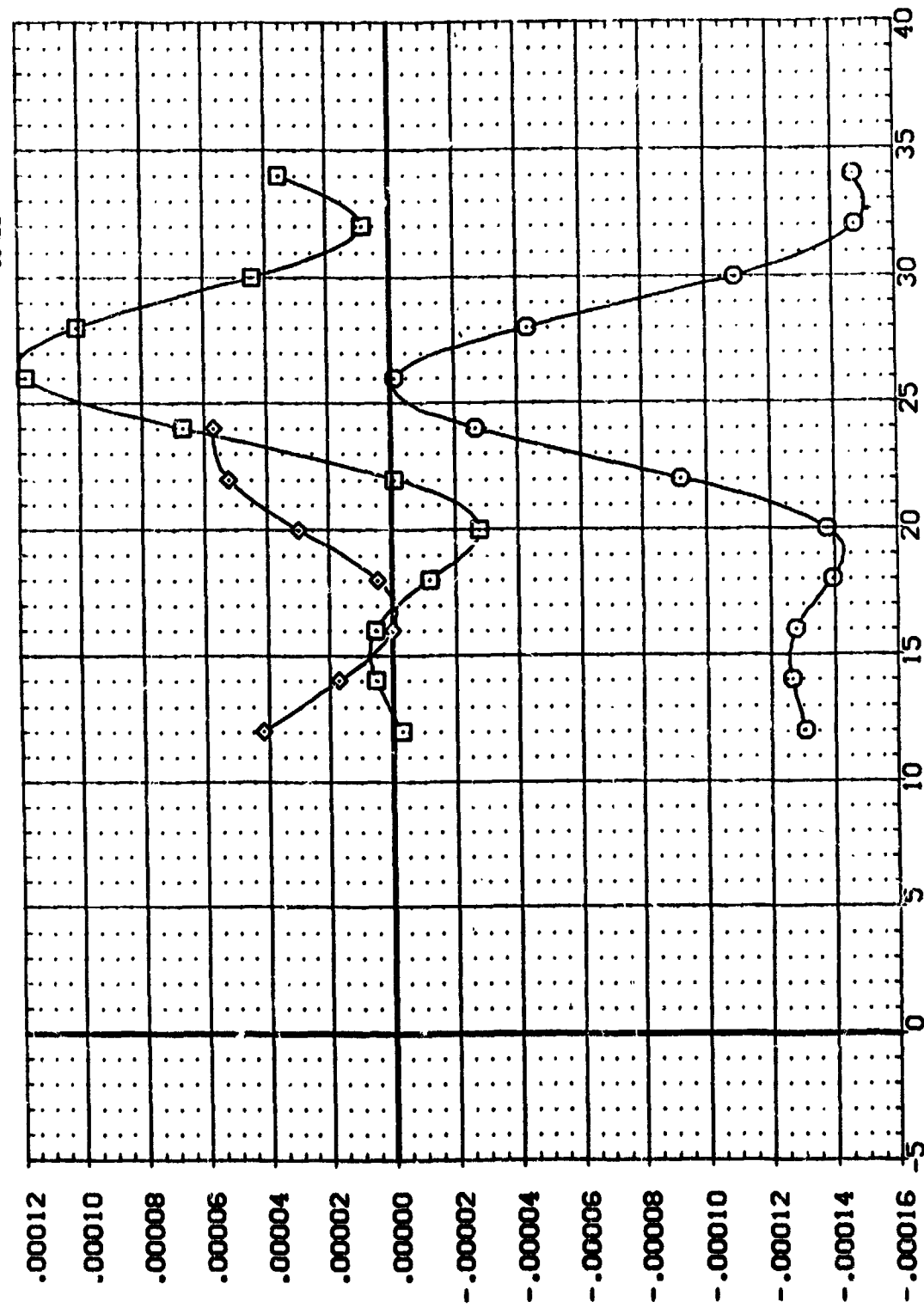
BVTNI  
 BVTNI  
 BVTNI

ORB. COF.  
 C2B. COF.  
 C3B. COF.

CONFIGURATION DESCRIPTION  
 MA-7.1PVT 1031. ROCKWELL PRR  
 MA-7.1PVT 1031. ROCKWELL PRR  
 MA-7.1PVT 1031. ROCKWELL PRR

DATA SET SYMBOL  
 (APRO25)  
 (APRO27)  
 (APRO28)

INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (BODY AXIS)



ANGLE OF ATTACK, ALPHA, DEGREES

YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF REYNOLDS NUMBER

(M)MACH = 4.00

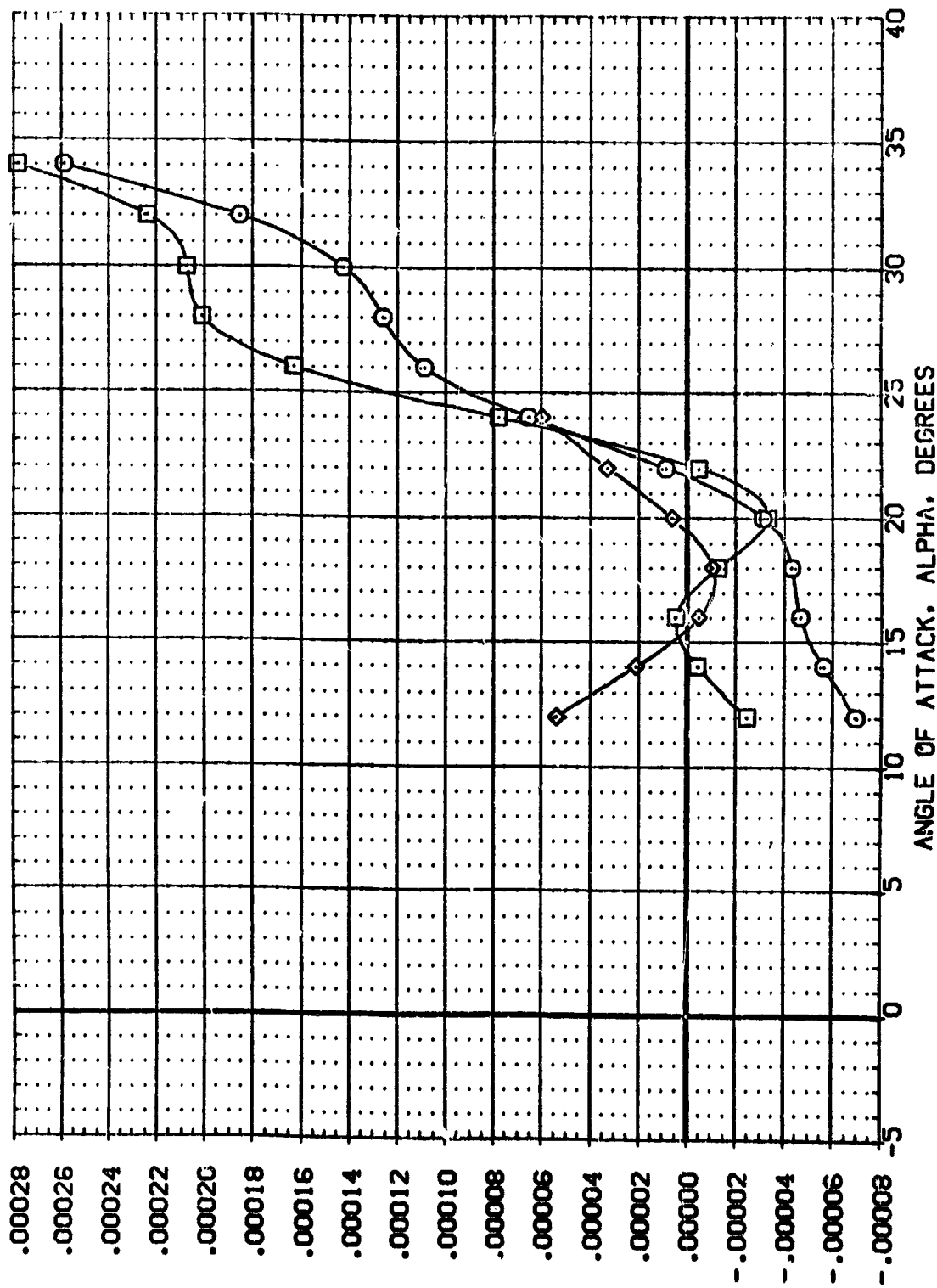
DATA SET SYMBOL: (APR026) (APR027) (APR028)

CONFIGURATION DESCRIPTION: MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF. MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF. MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF.

BETA: DLP0-J RVNL: .000 35.000 1.000 .000 100.000 3.000 .000 170.000 5.000

REFERENCE INFORMATION: SREF 7245 SC.FT. LREF 7.8928 INCHES BREF 13.1152 INCHES XWRP 12.5310 INCHES YWRP .0000 INCHES ZWRP 6.0000 INCHES SCALE .0150

INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (STABILITY AXIS)



YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00

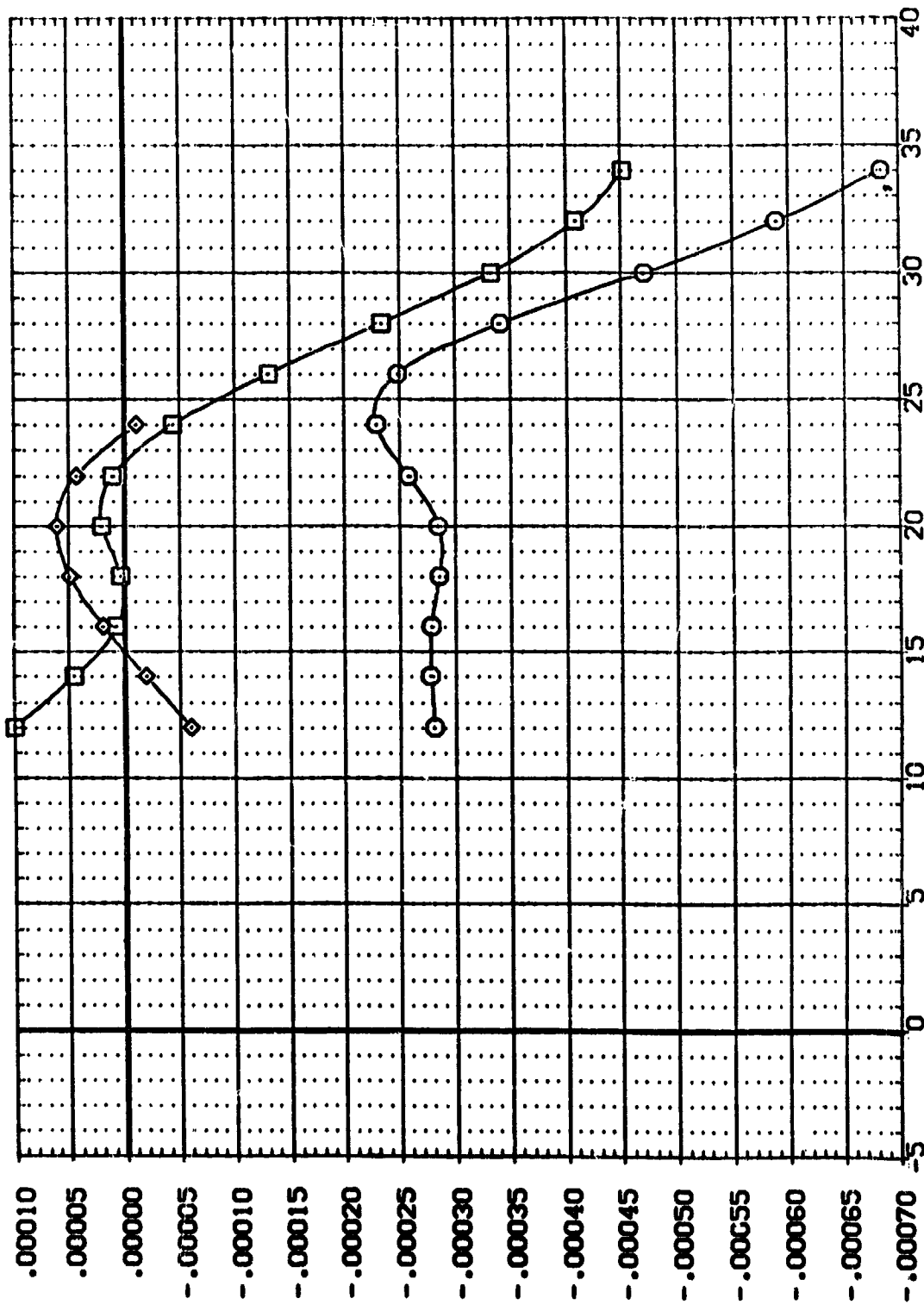
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 LREF 7.8829 INCHES  
 BREF 15.1152 INCHES  
 XREF 12.9510 INCHES  
 YREF 6.0000 INCHES  
 ZREF 6.0000 INCHES  
 SCALE 1:150

BETA DLP0-4 RV/L  
 .000 35.000 1.000  
 .000 100.000 3.000  
 .000 170.000 5.000

BVTNI  
 BVTNI  
 BVTNI

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AP026) MA-7-LPVT 1031: ROCKWELL PRR ORB: CONF:  
 (AP027) MA-7-LPVT 1031: ROCKWELL PRR ORB: CONF:  
 (AP028) MA-7-LPVT 1031: ROCKWELL PRR ORB: CONF:

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS (BODY AXIS)



ANGLE OF ATTACK, ALPHA, DEGREES

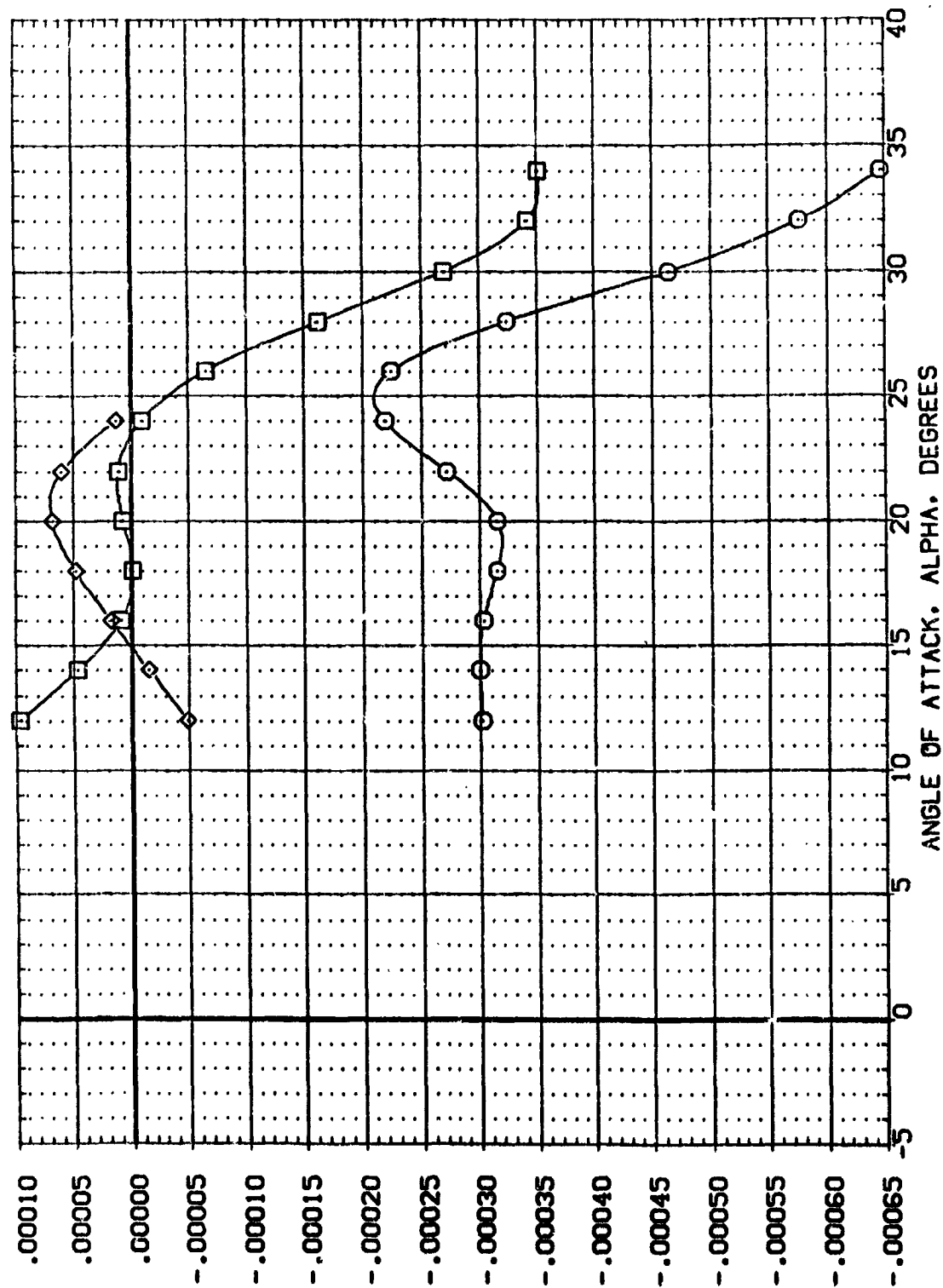
YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00



DATA SET SYMBOL (APMD26) (APMD27) (APMD28) CONFIGURATION DESCRIPTION MA-7, UPVT 1031, ROCKWELL PRR DB8, CONF: BV(TN) MA-7, UPVT 1031, ROCKWELL PRR DB8, CONF: BV(TN) MA-7, UPVT 1031, ROCKWELL PRR DB8, CONF: BV(TN) BETA DLPO-J RN/L .000 35.000 1.000 .000 100.000 3.000 .000 170.000 5.000 REFERENCE INFORMATION SREF 7245 50. FT. LREF 7.8828 INCHES BREF 15.1152 INCHES XMRP 12.9510 INCHES YMRP .0000 INCHES ZMRP 6.0000 INCHES SCALE .0150

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS STABILITY AXIS

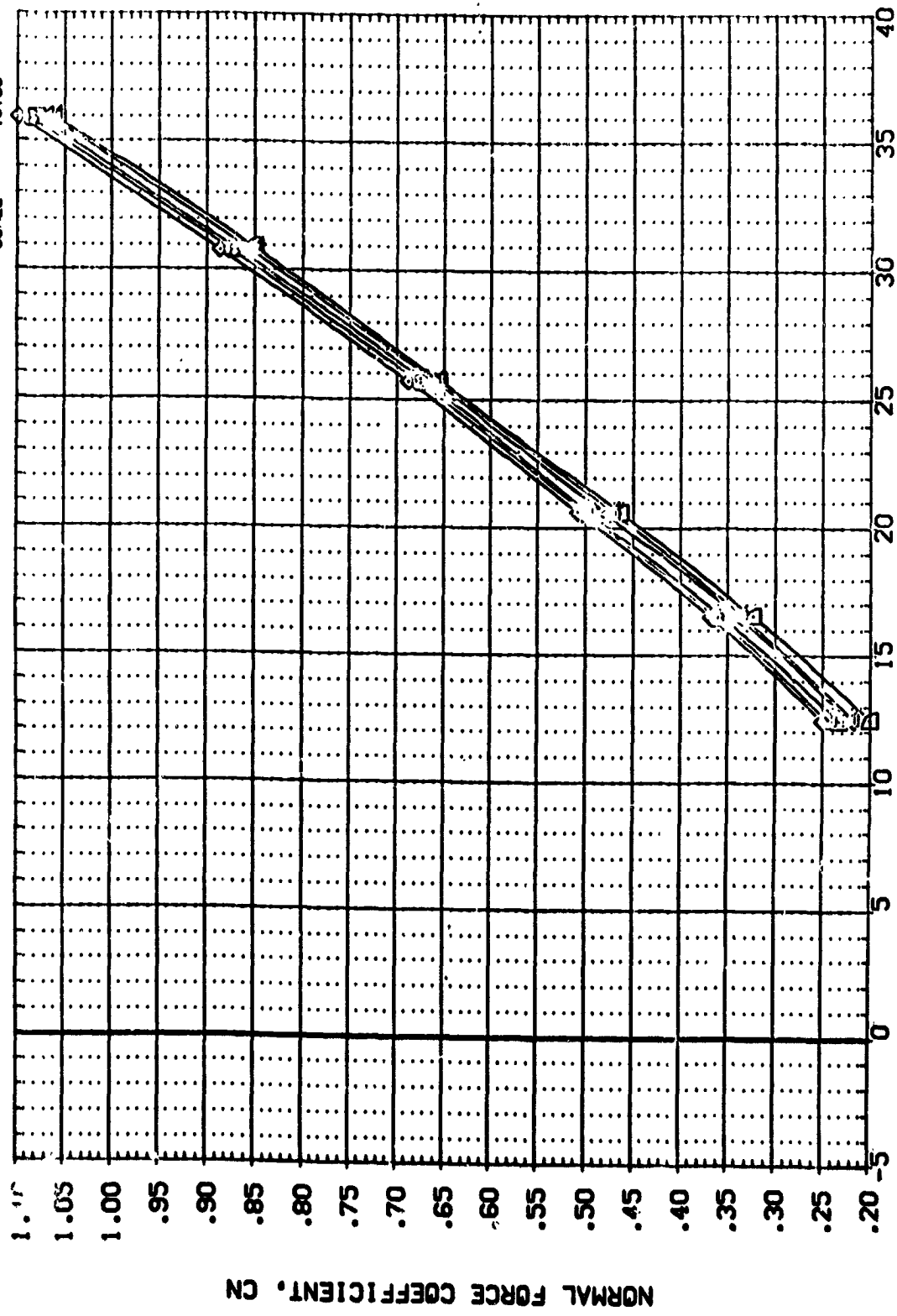


YAW JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF REYNOLDS NUMBER

(A)MACH = 4.00



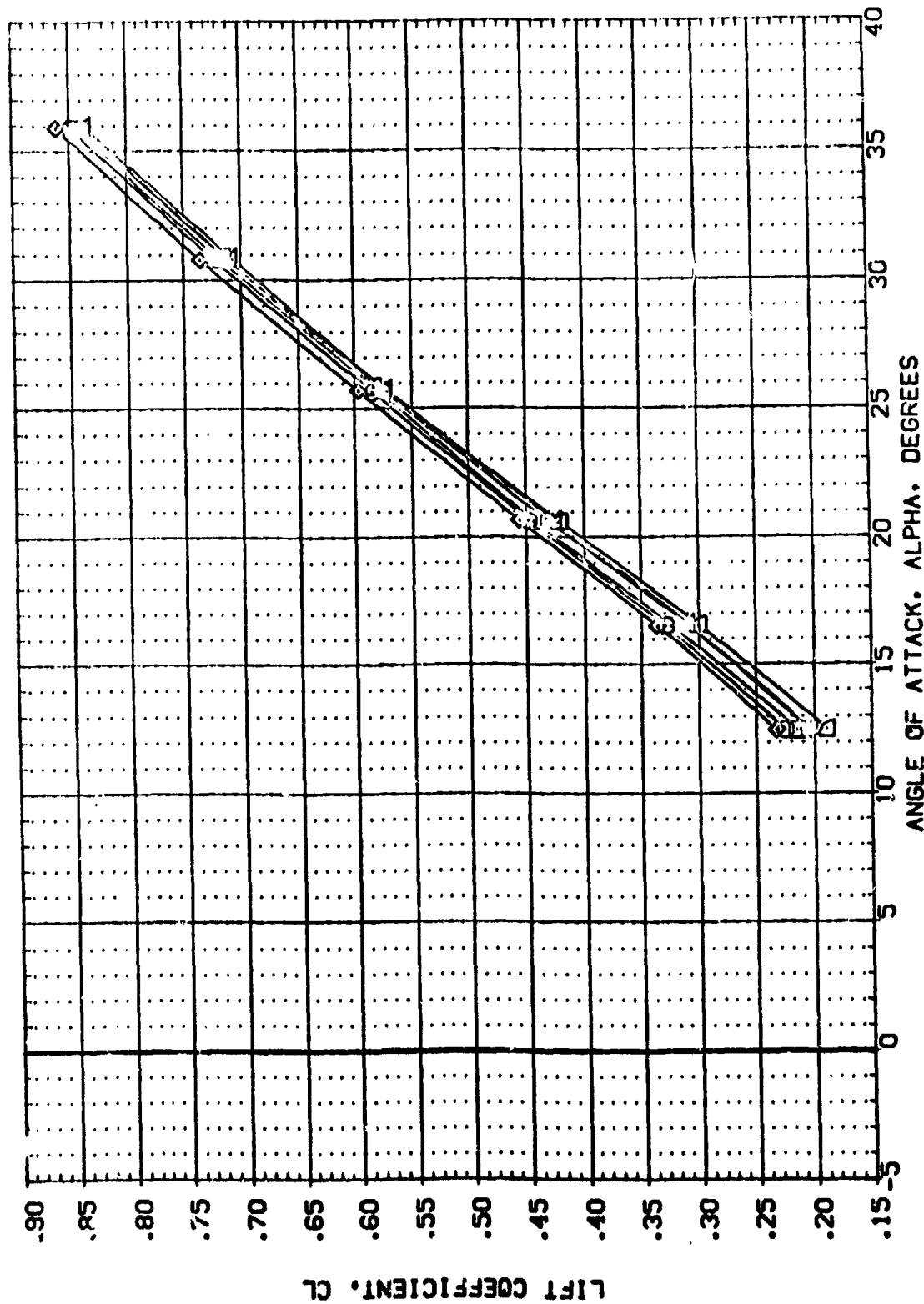
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CP040)	MA-7.UPT 1031.ROCKWELL PRR DRB. CONF.	.000	.000	1.000	SREF 7245 50.F.T.
(CP041)	MA-7.UPT 1031.ROCKWELL PRR DRB. CONF.	.000	.000	1.000	LREF 7.8628 17.14'S
(CP042)	MA-7.UPT 1031.ROCKWELL PRR DRB. CONF.	.000	.000	1.000	BREF 15.1152 17.14'S
(CP043)	MA-7.UPT 1031.ROCKWELL PRR DRB. CONF.	.000	.000	1.000	XRFP 12.9510 17.14'S
(CP044)	MA-7.UPT 1031.ROCKWELL PRR DRB. CONF.	.000	.000	1.000	YRFP 6.0000 17.14'S
(CP045)	MA-7.UPT 1031.ROCKWELL PRR DRB. CONF.	.000	.000	1.000	ZRFP 6.0000 17.14'S
(CP054)	MA-7.UPT 1031.ROCKWELL PRR DRB. CONF.	.000	.000	1.000	SCALE 1.0000



# EFFECT OF ROLL JET NOZZLE PRESSURE

(MACH = 4.00

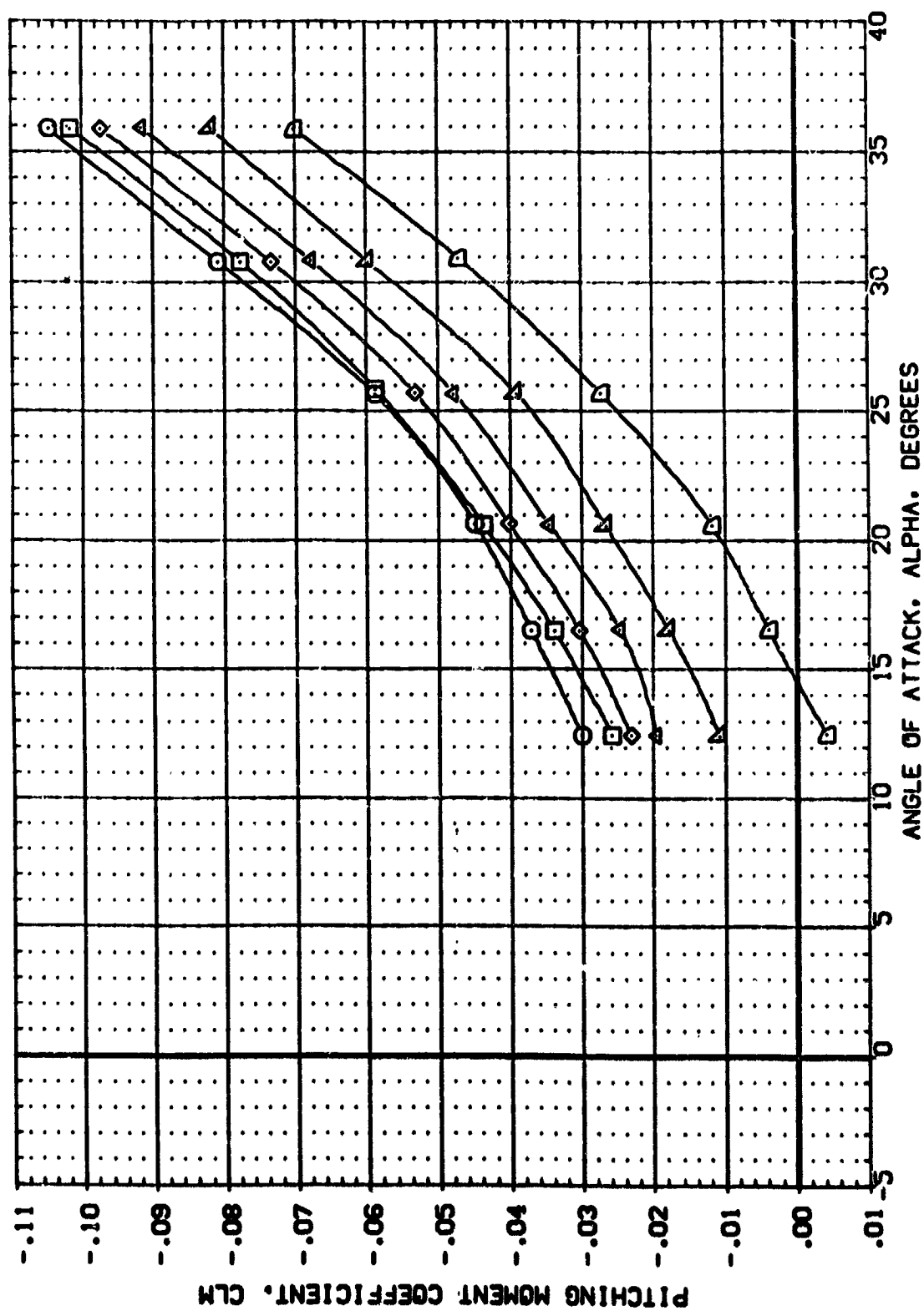
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVL	REFERENCE INFORMATION
(CP-040)	MA-7, UPVT 1031, ROCKWELL PRR 038	.000	.000	1.000	SREF 7.245 50.0 FT.
(CP-041)	MA-7, UPVT 1031, ROCKWELL PRR 038	.000	37.000	1.000	LREF 7.8828 100.0 FT.
(CP-045)	MA-7, UPVT 1031, ROCKWELL PRR 038	.000	59.000	1.000	BREF 15.1152 100.0 FT.
(CP-049)	MA-7, UPVT 1031, ROCKWELL PRR 038	.000	199.000	1.000	XPRP 2.9610 100.0 FT.
(CP-050)	MA-7, UPVT 1031, ROCKWELL PRR 038	.000	328.000	1.000	YPRP 6.0000 100.0 FT.
(CP-054)	MA-7, UPVT 1031, ROCKWELL PRR 038	.000	600.000	1.000	ZPRP 10.000 100.0 FT.



EFFECT OF ROLL JET NOZZLE PRESSURE

(M)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CP040)	MA-7, UPVT 1031, ROCKWELL PRR C78	.000	.000	1.000	SREF 7245 SQ. FT.
(CP041)	MA-7, UPVT 1031, ROCKWELL PRR C78	.000	37.000	1.000	LREF 7.8628 INCHES
(CP042)	MA-7, UPVT 1031, ROCKWELL PRR C78	.000	99.000	1.000	BREF 15.1152 INCHES
(CP043)	MA-7, UPVT 1031, ROCKWELL PRR C78	.000	199.000	1.000	XREF 12.9510 INCHES
(CP044)	MA-7, UPVT 1031, ROCKWELL PRR C78	.000	328.000	1.000	YREF 6.0000 INCHES
(CP045)	MA-7, UPVT 1031, ROCKWELL PRR C78	.000	600.000	1.000	ZREF .0150 INCHES
(CP046)	MA-7, UPVT 1031, ROCKWELL PRR C78	.000			SCALE



EFFECT OF ROLL JET NOZZLE PRESSURE

(MACH = 4.00)

DATA SET SYMBOL: (SP043) (SP045) (SP046) (SP048) (SP049) (SP050) (SP054)

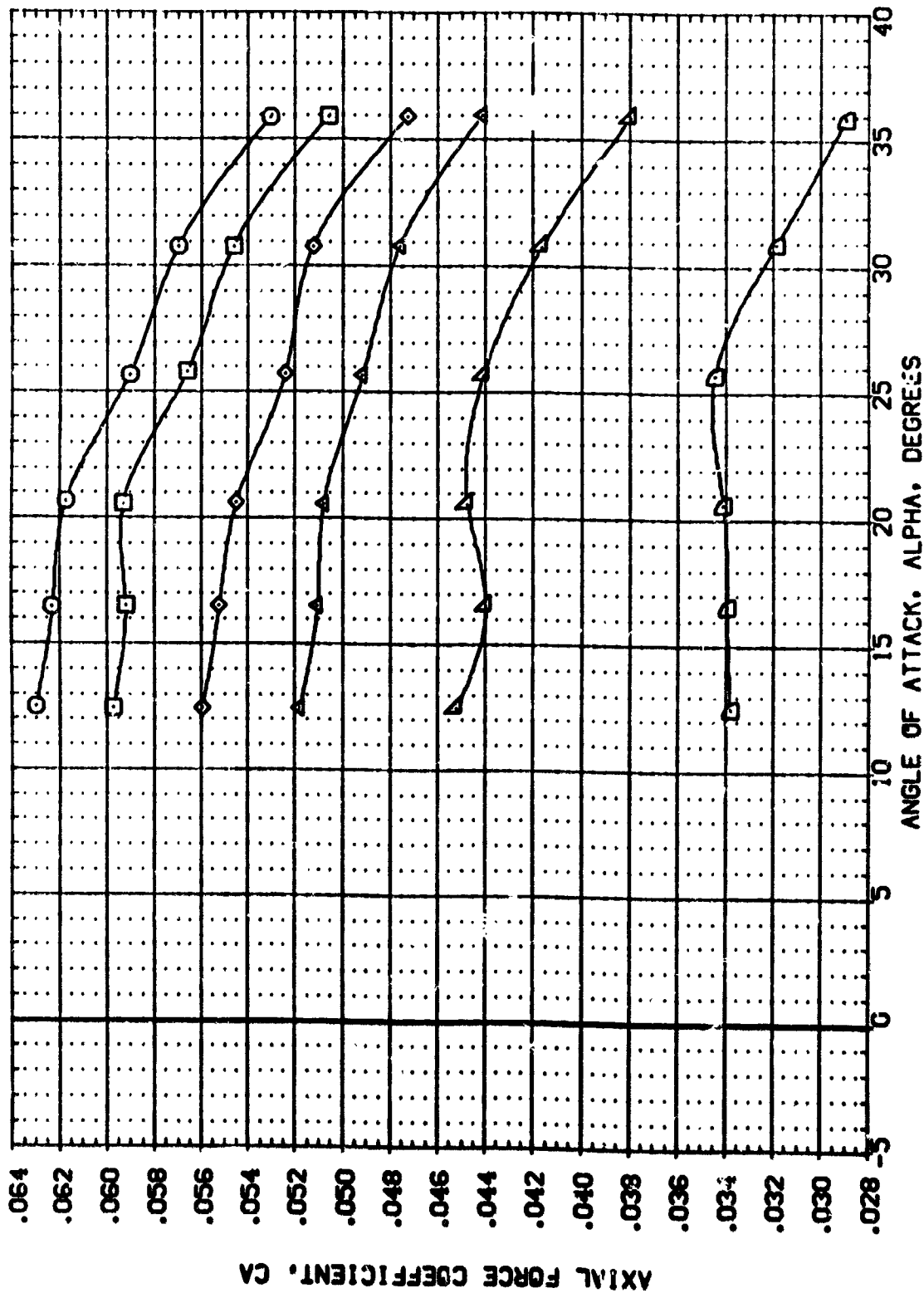
CONFIGURATION DESCRIPTION: MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN4  
 MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN4  
 MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN4  
 MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN4  
 MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN4  
 MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN4

BETA: .000 .000 .000 .000 .000 .000

PO-JET: .000 37.000 59.000 199.000 328.000 600.000

RN/L: 1.000 1.000 1.000 1.000 1.000 1.000

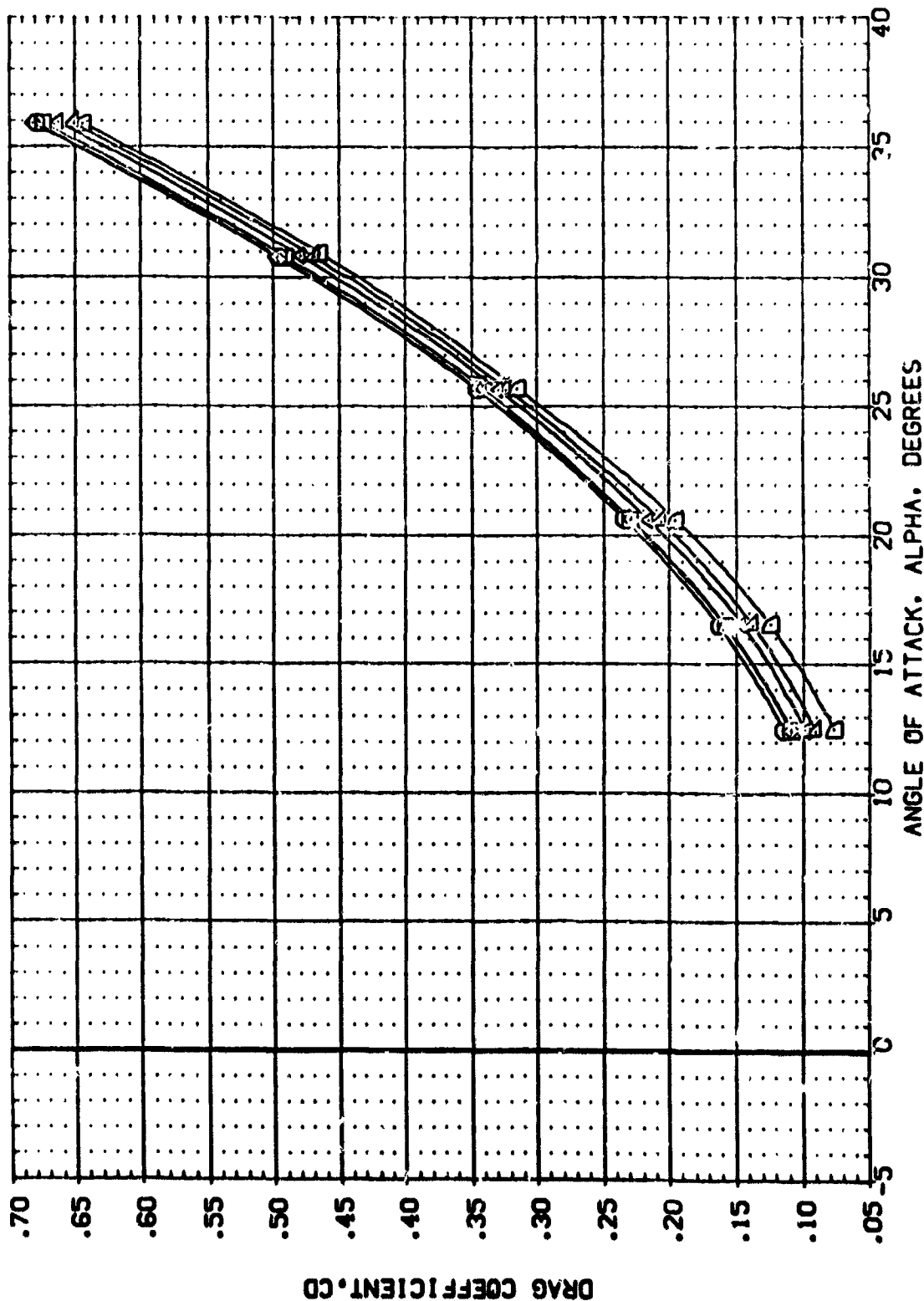
REFERENCE INFORMATION: SREF 7.245 SQ.FT. LREF 7.8828 INCHES BREF 15.1152 INCHES XREF 12.9510 INCHES YREF .0000 INCHES ZREF 6.0000 INCHES SCALE .0150



EFFECT OF ROLL JET NOZZLE PRESSURE

(A)MACH = 4.00

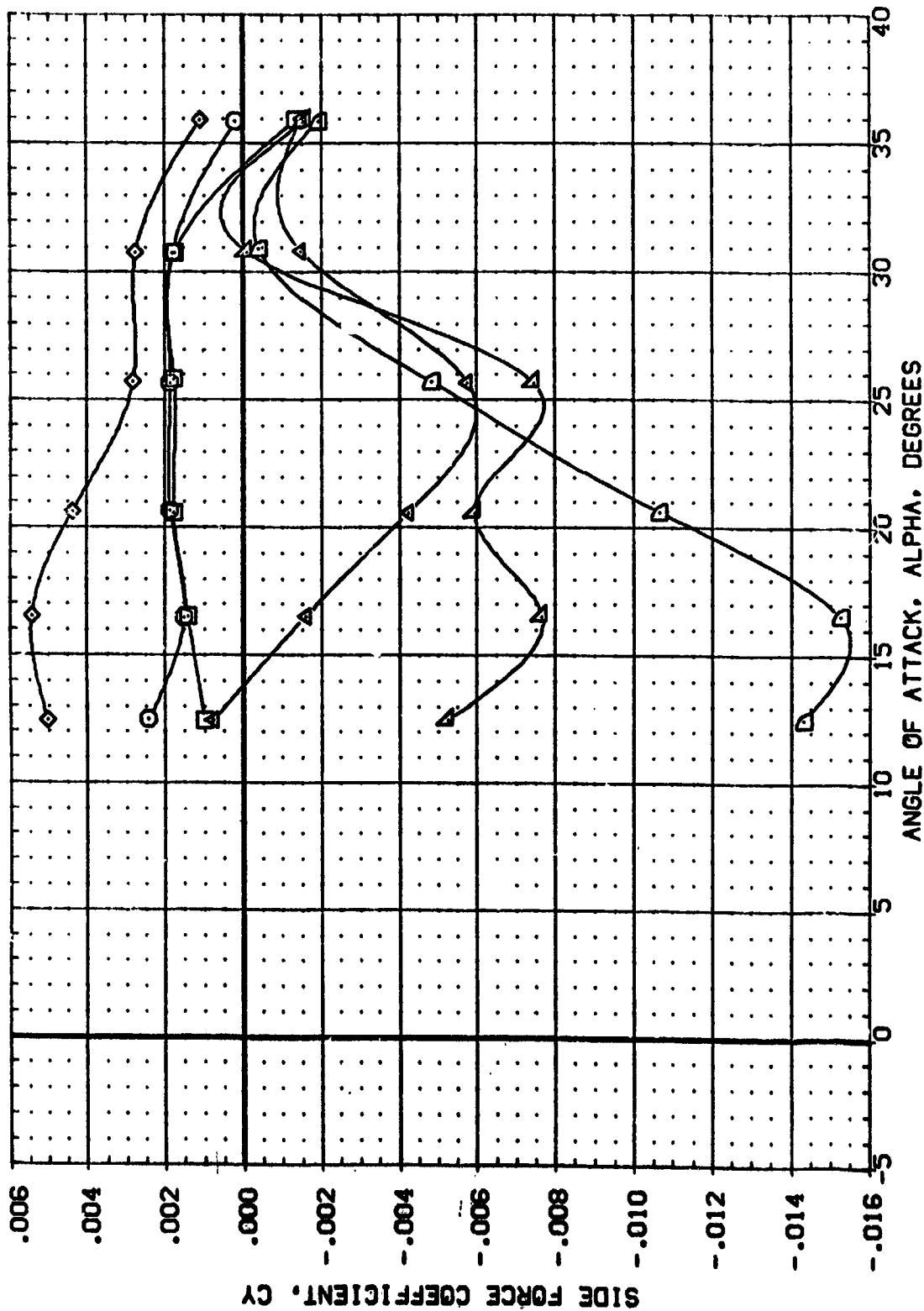
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CPH040)	MA-7,UPVT 1031,ROCKWELL PRR DB8	.000	.000	1.000	SREF .7245 SC.F.T.
(CPH045)	MA-7,UPVT 1031,ROCKWELL PRR DB8	.000	37.000	1.000	LREF 7.0828 SC.F.T.
(CPH046)	MA-7,UPVT 1031,ROCKWELL PRR DB8	.000	99.000	1.000	BREF 15.1152 SC.F.T.
(CPH049)	MA-7,UPVT 1031,ROCKWELL PRR DB8	.000	199.000	1.000	XPREF 12.9570 SC.F.T.
(CPH050)	MA-7,UPVT 1031,ROCKWELL PRR DB8	.000	328.000	1.000	YMPREF 6.0000 SC.F.T.
(CPH054)	MA-7,UPVT 1031,ROCKWELL PRR DB8	.000	600.000	1.000	ZMPREF 6.0000 SC.F.T.
					SCALE 6.0150



EFFECT OF ROLL JET NOZZLE PRESSURE

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH040)	MA-7-UPVT 1031-ROCKWELL PRR CR8.	.000	.000	.000	SREF .7245 SQ.FT.
(CPH045)	MA-7-UPVT 1031-ROCKWELL PRR CR8.	.000	.000	.000	LREF 7.8828 INCHES
(CPH046)	MA-7-UPVT 1031-ROCKWELL PRR CR8.	.000	.000	.000	BREF 15.1152 INCHES
(CPH049)	MA-7-UPVT 1031-ROCKWELL PRR CR8.	.000	.000	.000	YMRP 12.9510 INCHES
(CPH050)	MA-7-UPVT 1031-ROCKWELL PRR CR8.	.000	.000	.000	ZMRP 6.0000 INCHES
(CPH054)	MA-7-UPVT 1031-ROCKWELL PRR CR8.	.000	.000	.000	SCALE .0150

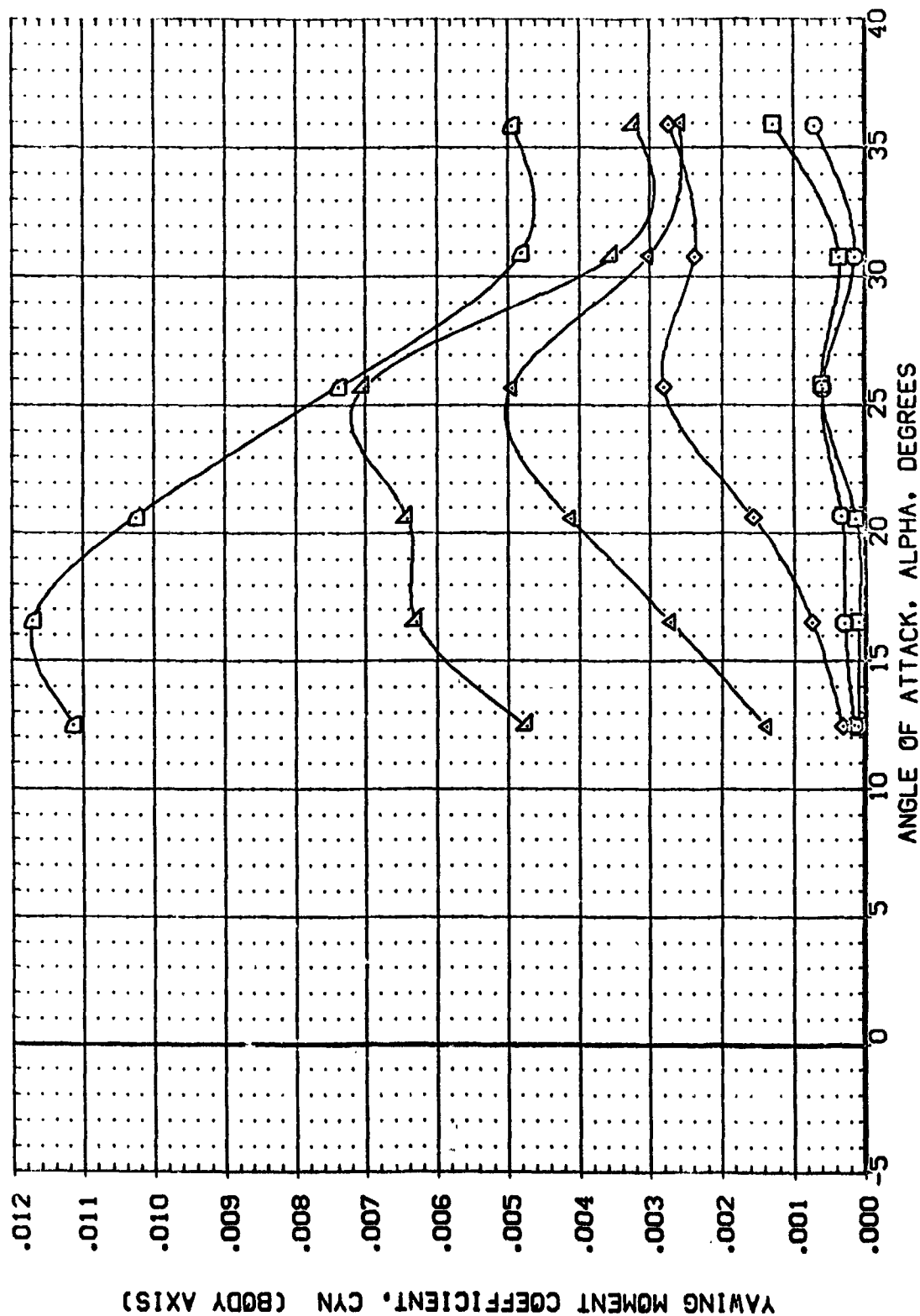


EFFECT OF ROLL JET NOZZLE PRESSURE

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION	DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CP040)	MA-7, UPVT	1031, ROCKVELL	.000	.000	1.000	SREF 7245 SC.FT.
(CP041)	MA-7, UPVT	1031, ROCKVELL	.000	.000	1.000	LREF 7.8828 NCES
(CP042)	MA-7, UPVT	1031, ROCKVELL	.000	.000	1.000	BREF 15.1152 NCES
(CP043)	MA-7, UPVT	1031, ROCKVELL	.000	.000	1.000	XMRP 12.9510 NCES
(CP044)	MA-7, UPVT	1031, ROCKVELL	.000	.000	1.000	YMRP .0000 NCES
(CP045)	MA-7, UPVT	1031, ROCKVELL	.000	.000	1.000	ZMRP 6.0000 NCES
(CP046)	MA-7, UPVT	1031, ROCKVELL	.000	.000	1.000	SCALE .0150

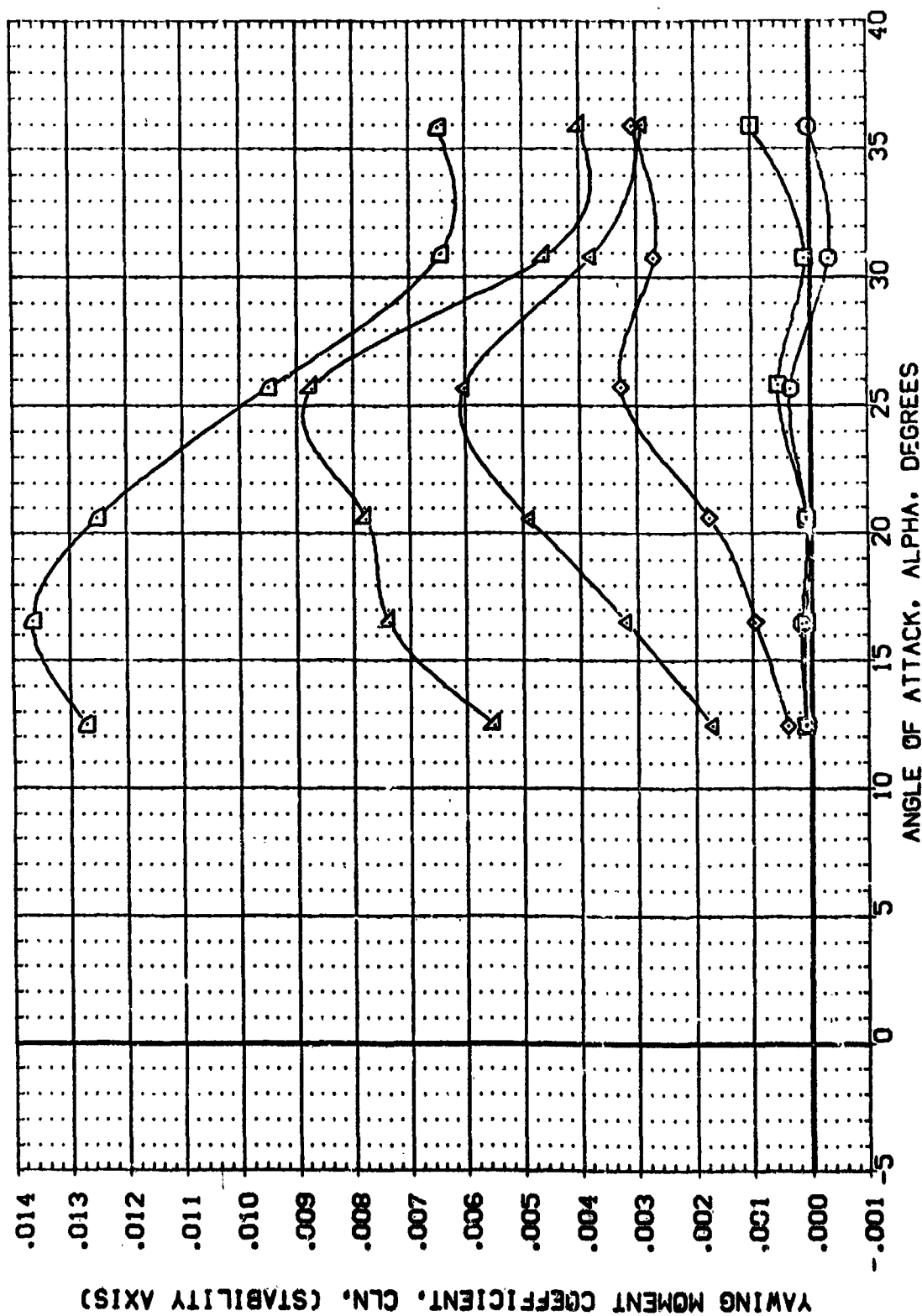


EFFECT OF ROLL JET NOZZLE PRESSURE

(A) MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RNVL	REFERENCE INFORMATION
(CPM040)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	1.000	SREF 7245 SQ.FT.
(CPM045)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	37.000	1.000	LREF 7.8928 INCHES
(CPM046)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	59.000	1.000	BREF 15.1152 INCHES
(CPM049)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	159.000	1.000	XREF 12.9513 INCHES
(CPM050)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	328.000	1.000	YREF 6.0000 INCHES
(CPM054)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	600.000	1.000	ZREF 6.0153 INCHES

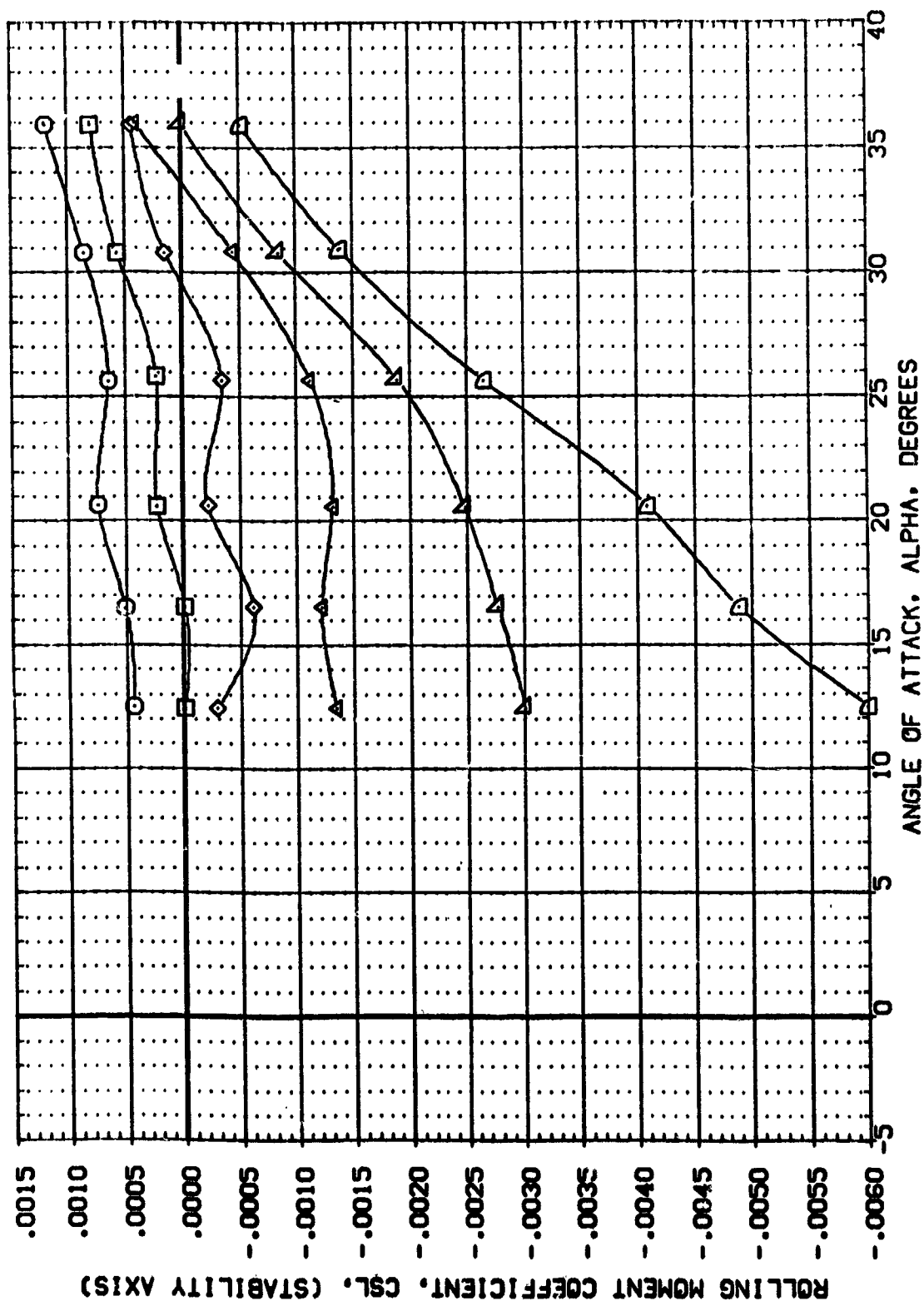


EFFECT OF ROLL JET NOZZLE PRESSURE

(A)MACH = 4.00



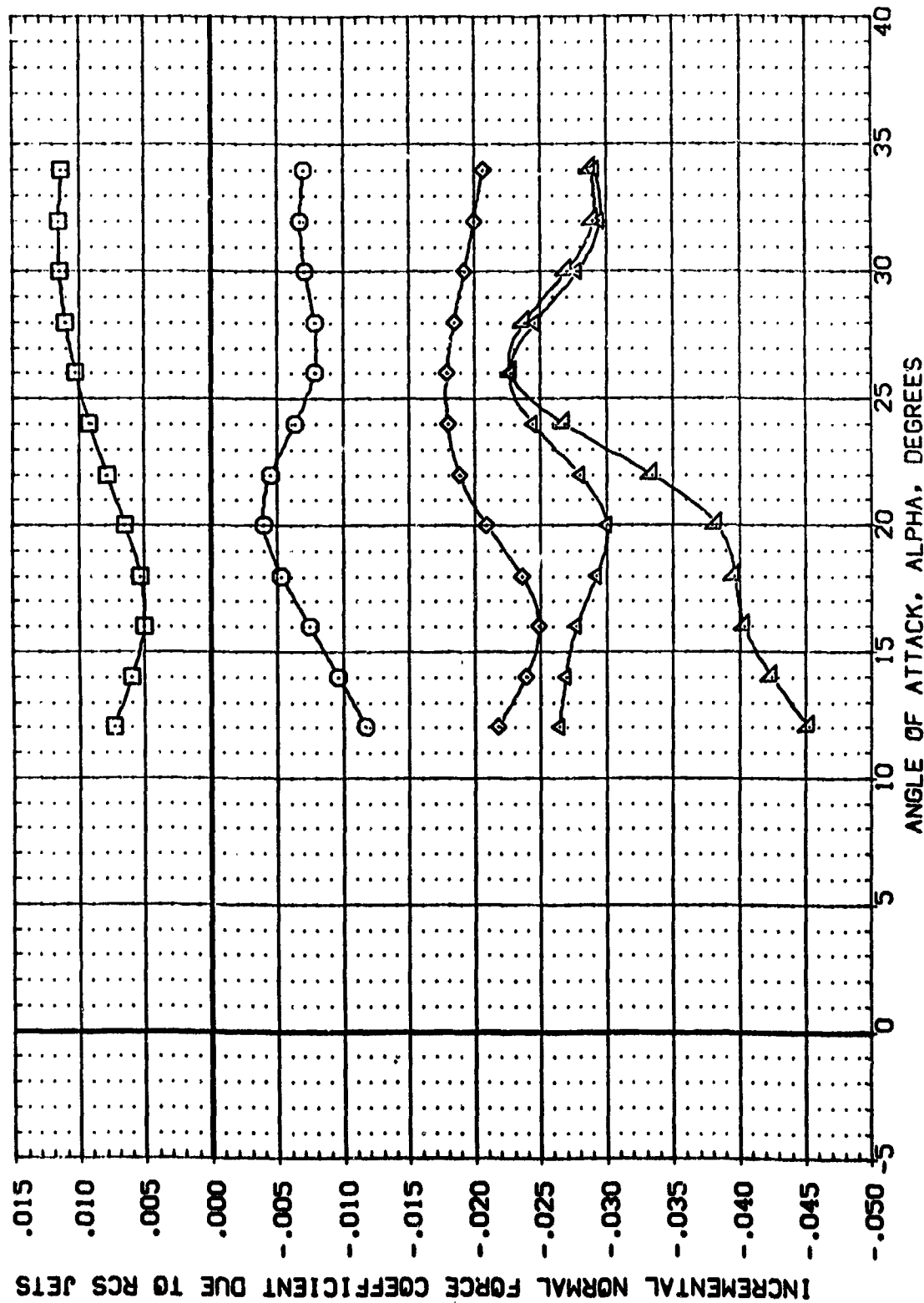
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CONF	RV/N4	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CPH040)	MA-7,UPVT 1031,ROCKWELL PRR CRB	CONF	RV/N4	.000	.000	1.000	SREF 7245
(CPH045)	MA-7,UPVT 1031,ROCKWELL PRR CRB	CONF	RV/N4	.000	37.000	1.000	LREF 7.8825
(CPH046)	MA-7,UPVT 1031,ROCKWELL PRR CRB	CONF	RV/N4	.000	59.000	1.000	BREF 15.1152
(CPH049)	MA-7,UPVT 1031,ROCKWELL PRR CRB	CONF	RV/N4	.000	199.000	1.000	YMRP 12.5510
(CPH050)	MA-7,UPVT 1031,ROCKWELL PRR CRB	CONF	RV/N4	.000	328.000	1.000	ZMRP 6.0000
(CPH054)	MA-7,UPVT 1031,ROCKWELL PRR CRB	CONF	RV/N4	.000	600.000	1.000	SCALE .0150



EFFECT OF ROLL JET NOZZLE PRESSURE

(A)MACH = 4.00

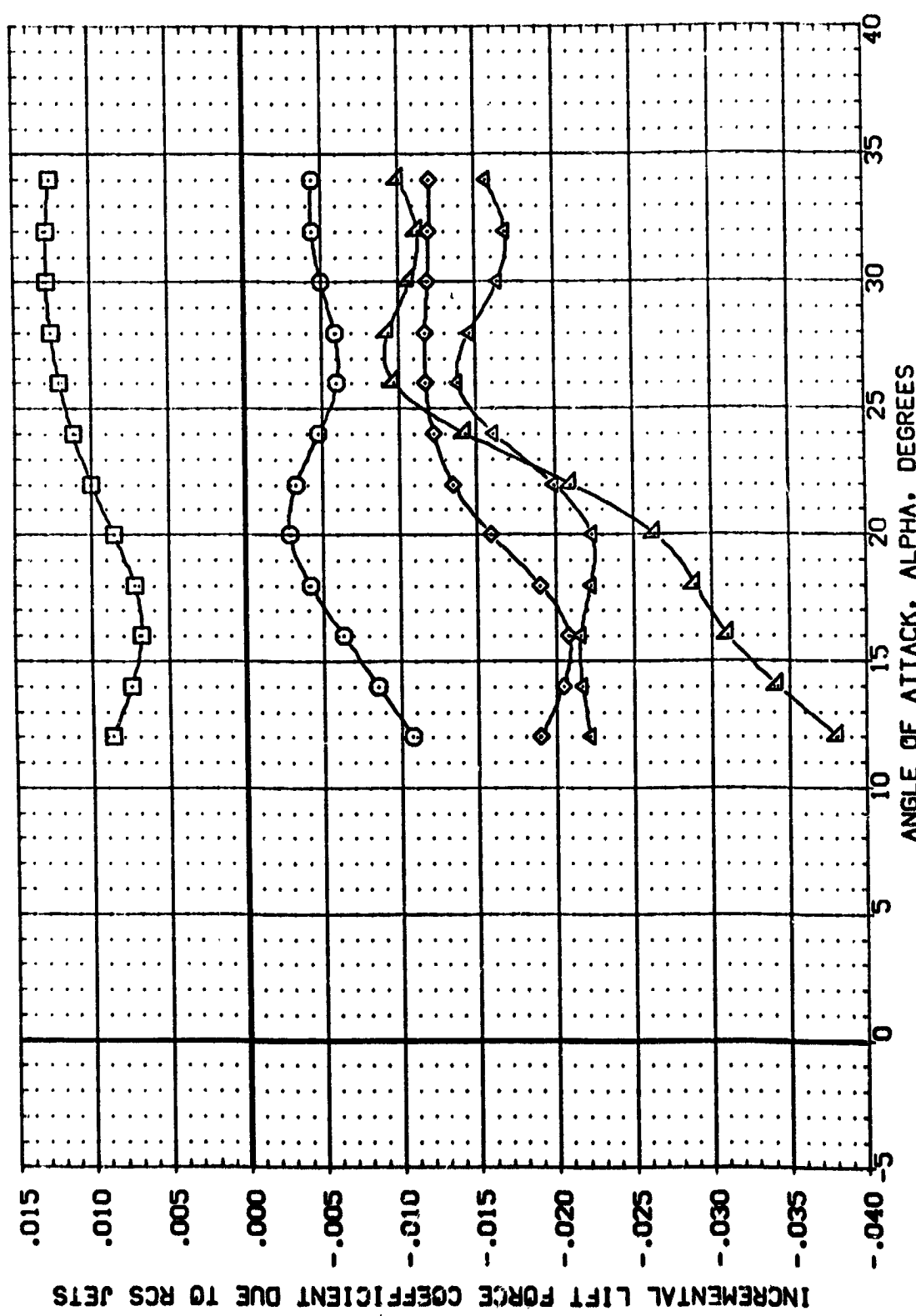
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPU-J	RNVL	REFERENCE INFORMATION
(AP045)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF.	.000	37.000	1.000	SREF 7245 SQ. FT.
(AP046)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF.	.000	99.000	1.000	LREF 7.8928 INCHES
(AP049)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF.	.000	199.000	1.000	BREF 15.1152 INCHES
(AP050)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF.	.000	328.000	1.000	XV-29 12.9510 INCHES
(AP054)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF.	.000	600.000	1.000	YV-29 6.0000 INCHES
					ZV-29 6.0000 INCHES
					SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET NOZZLE PRESSURE

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(APMD45)	MA-7. UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	37.000	1.000	SREF 7245 50. FT.
(APMD46)	MA-7. UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	99.000	1.000	LREF 7.8828 INCHES
(APMD49)	MA-7. UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	199.000	1.000	BREF 15.1152 INCHES
(APMD50)	MA-7. UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	328.000	1.000	XTRP 12.9510 INCHES
(APMD54)	MA-7. UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	600.000	1.000	YTRP 6.0000 INCHES
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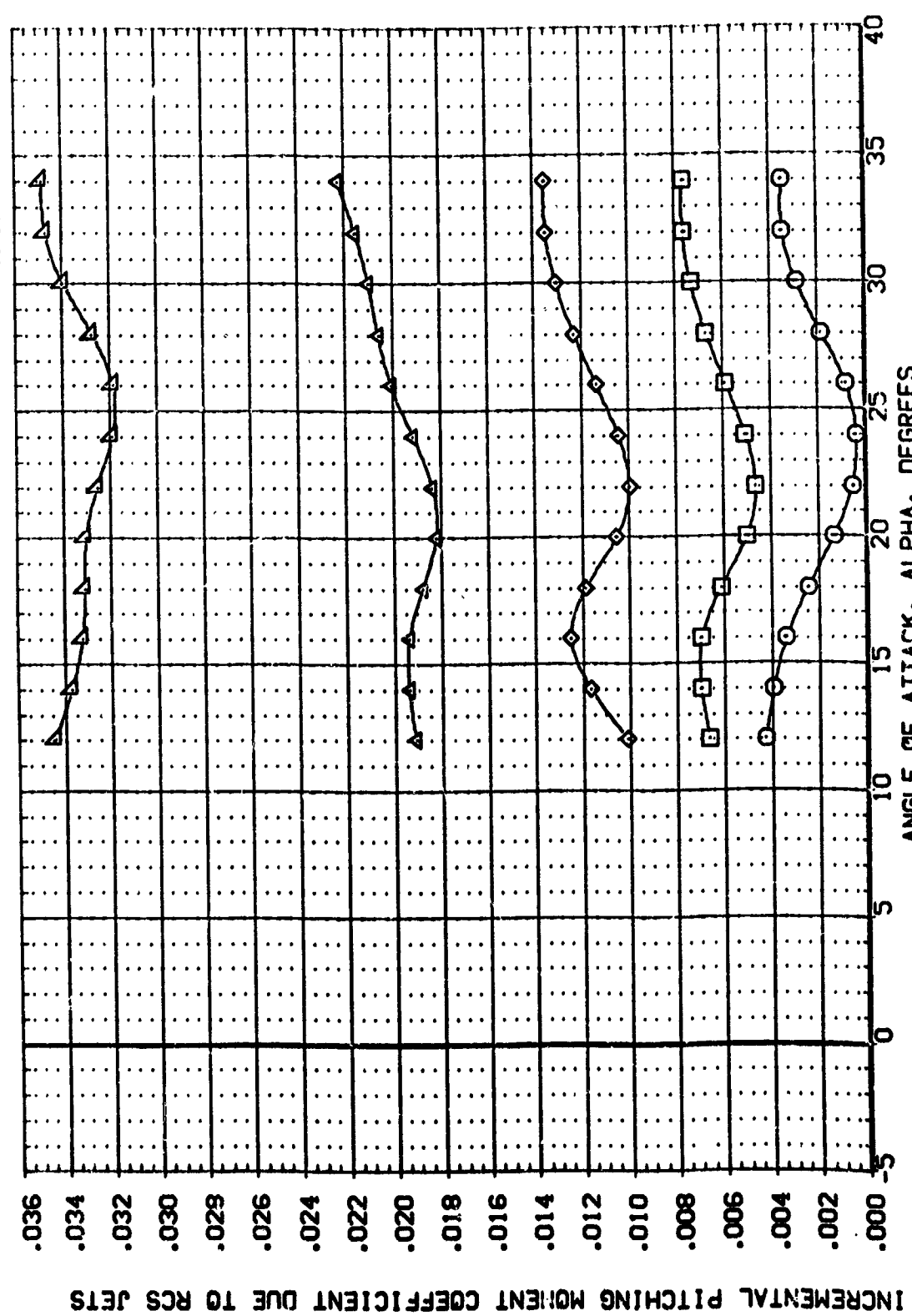


ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET NOZZLE PRESSURE  
 (A)MACH = 4.00



DATA SET SYMBOL      CONFIGURATION DESCRIPTION      ORB.      CONF.      BVTN4      BETA      DLP0-J      RNVL      REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORB.	CONF.	BVTN4	BETA	DLP0-J	RNVL	REFERENCE INFORMATION
(APRO45)	MA-7, LPVT 1031, ROCKWELL PRR	ORB.	CONF.	BVTN4	.000	37.000	1.000	SREF 7245 SQ. FT.
(APRO45)	MA-7, LPVT 1031, ROCKWELL PRR	ORB.	CONF.	BVTN4	.000	39.000	1.000	LREF 7.6928 INCHES
(APRO45)	MA-7, LPVT 1031, ROCKWELL PRR	ORB.	CONF.	BVTN4	.000	193.000	1.000	BREF 15.6928 INCHES
(APRO45)	MA-7, LPVT 1031, ROCKWELL PRR	ORB.	CONF.	BVTN4	.000	328.000	1.000	XPRP 12.5510 INCHES
(APRO45)	MA-7, LPVT 1031, ROCKWELL PRR	ORB.	CONF.	BVTN4	.000	600.000	1.000	YPRP 6.0000 INCHES
(APRO45)	MA-7, LPVT 1031, ROCKWELL PRR	ORB.	CONF.	BVTN4	.000	600.000	1.000	ZPRP 6.0000 INCHES
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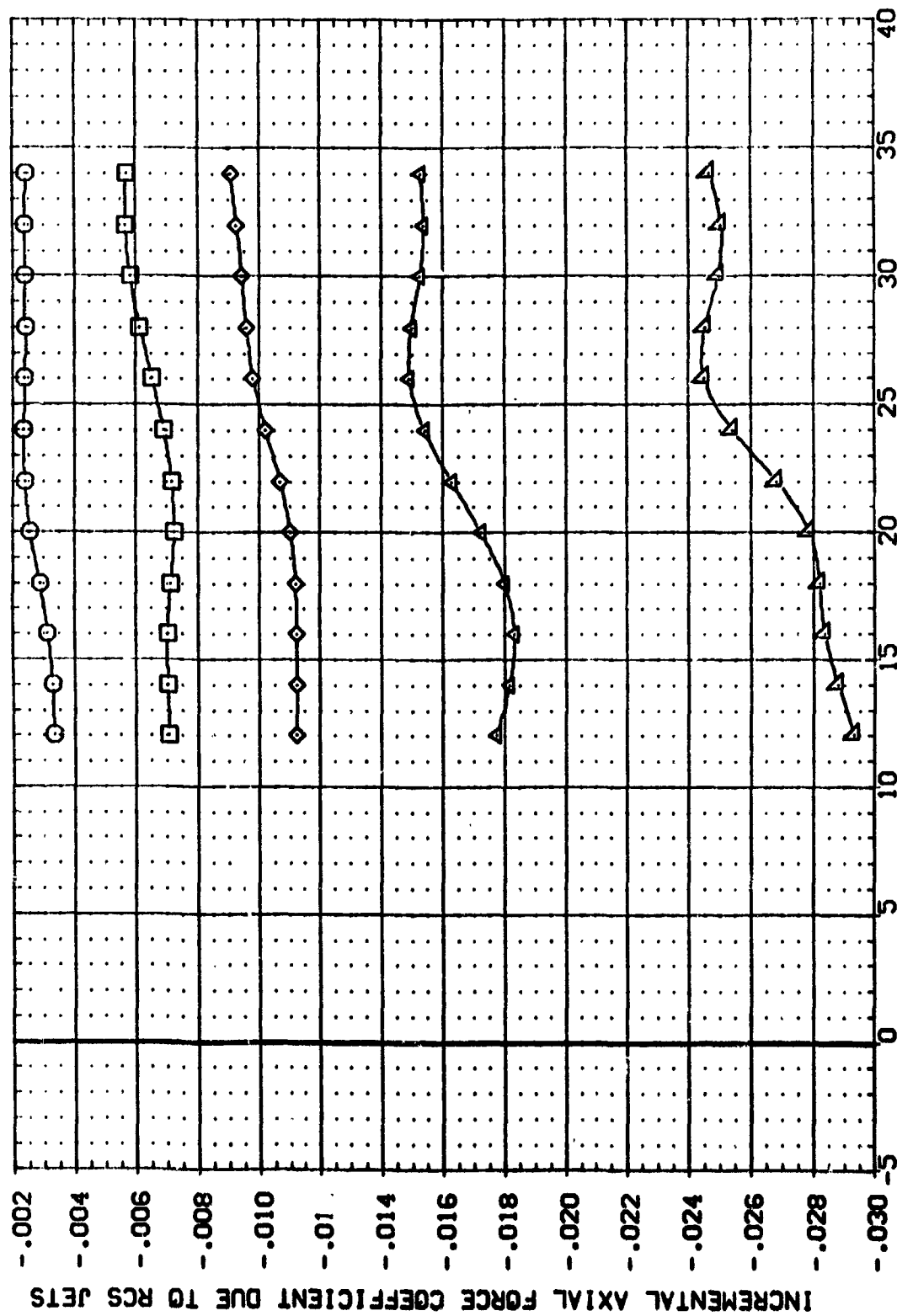


ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET NOZZLE PRESSURE

(A)MACH = 4.00

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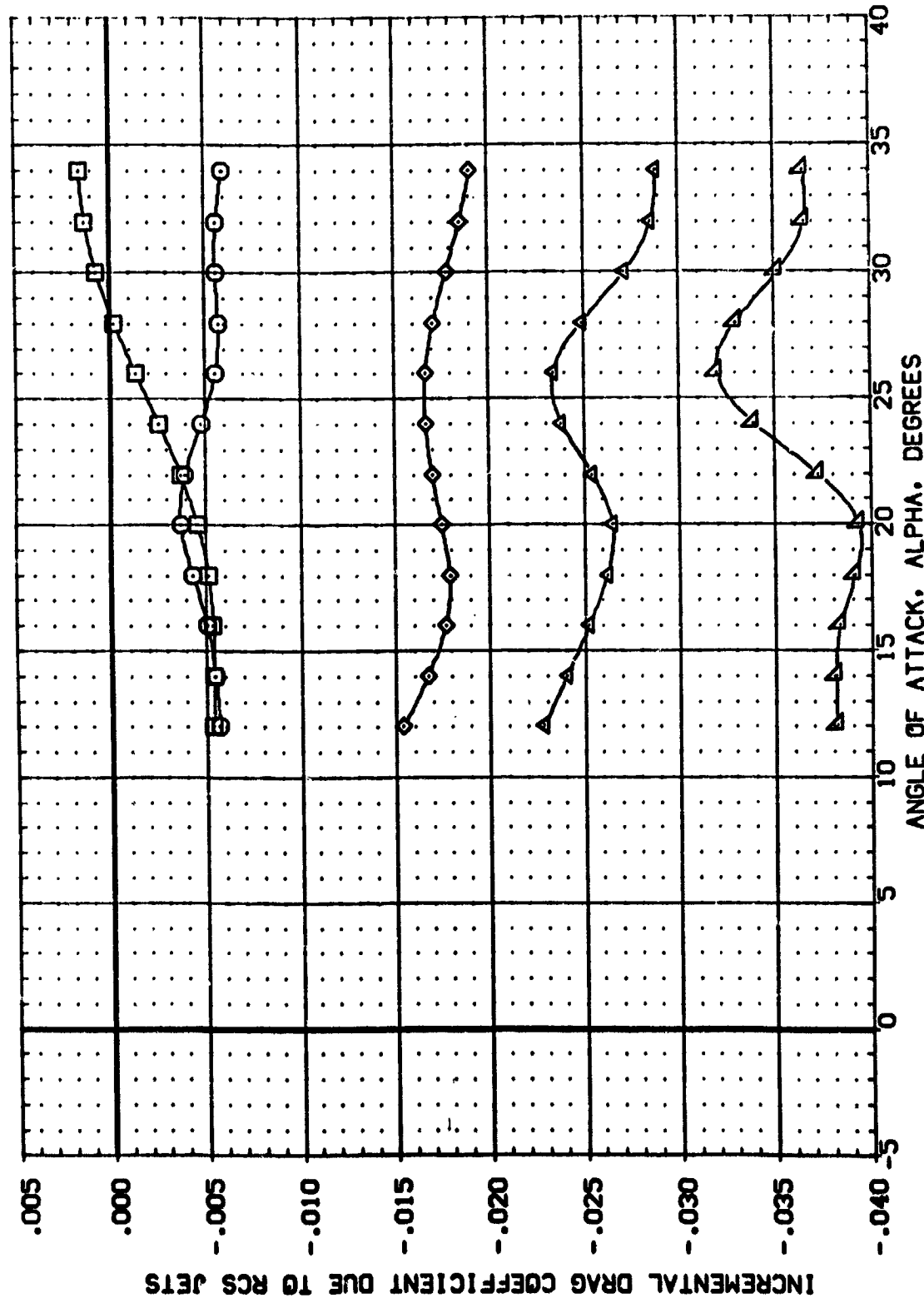
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPG-J	RN/L	REFERENCE INFORMATION
(AP045)	MA-7.1PVT 1031. ROCKWELL PRR CR8. CONF.	.000	37.000	1.000	SREF .7245 SO. FT.
(AP046)	MA-7.1PVT 1031. ROCKWELL PRR CR8. CONF.	.000	58.000	1.000	LREF 7.8828 INCHES
(AP047)	MA-7.1PVT 1031. ROCKWELL PRR CR8. CONF.	.000	139.000	1.000	BREF 15.1152 INCHES
(AP048)	MA-7.1PVT 1031. ROCKWELL PRR CR8. CONF.	.000	328.000	1.000	XREF 2.9510 INCHES
(AP049)	MA-7.1PVT 1031. ROCKWELL PRR CR8. CONF.	.000	600.000	1.000	YREF .0000 INCHES
(AP050)	MA-7.1PVT 1031. ROCKWELL PRR CR8. CONF.	.000			ZREF 6.0000 INCHES
(AP051)	MA-7.1PVT 1031. ROCKWELL PRR CR8. CONF.				SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET NOZZLE PRESSURE

(MACH = 4.00)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(APD045)	MA-7.0PVT 1031.ROCKWELL PRR 308. CONF. BVTM4	.000	37.000	1.000	SREF 7245 50. FT.
(APD046)	MA-7.0PVT 1031.ROCKWELL PRR 008. CONF. BVTM4	.000	99.000	1.000	LREF 7.8828 INCHES
(APD049)	MA-7.0PVT 1031.ROCKWELL PRR 008. CONF. BVTM4	.000	199.000	1.000	EREF 15.1152 INCHES
(APD050)	MA-7.0PVT 1031.ROCKWELL PRR 008. CONF. BVTM4	.000	328.000	1.000	YREF 12.9510 INCHES
(APD054)	MA-7.0PVT 1031.ROCKWELL PRR 008. CONF. BVTM4	.000	600.000	1.000	ZREF .0000 INCHES
					SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET NOZZLE PRESSURE

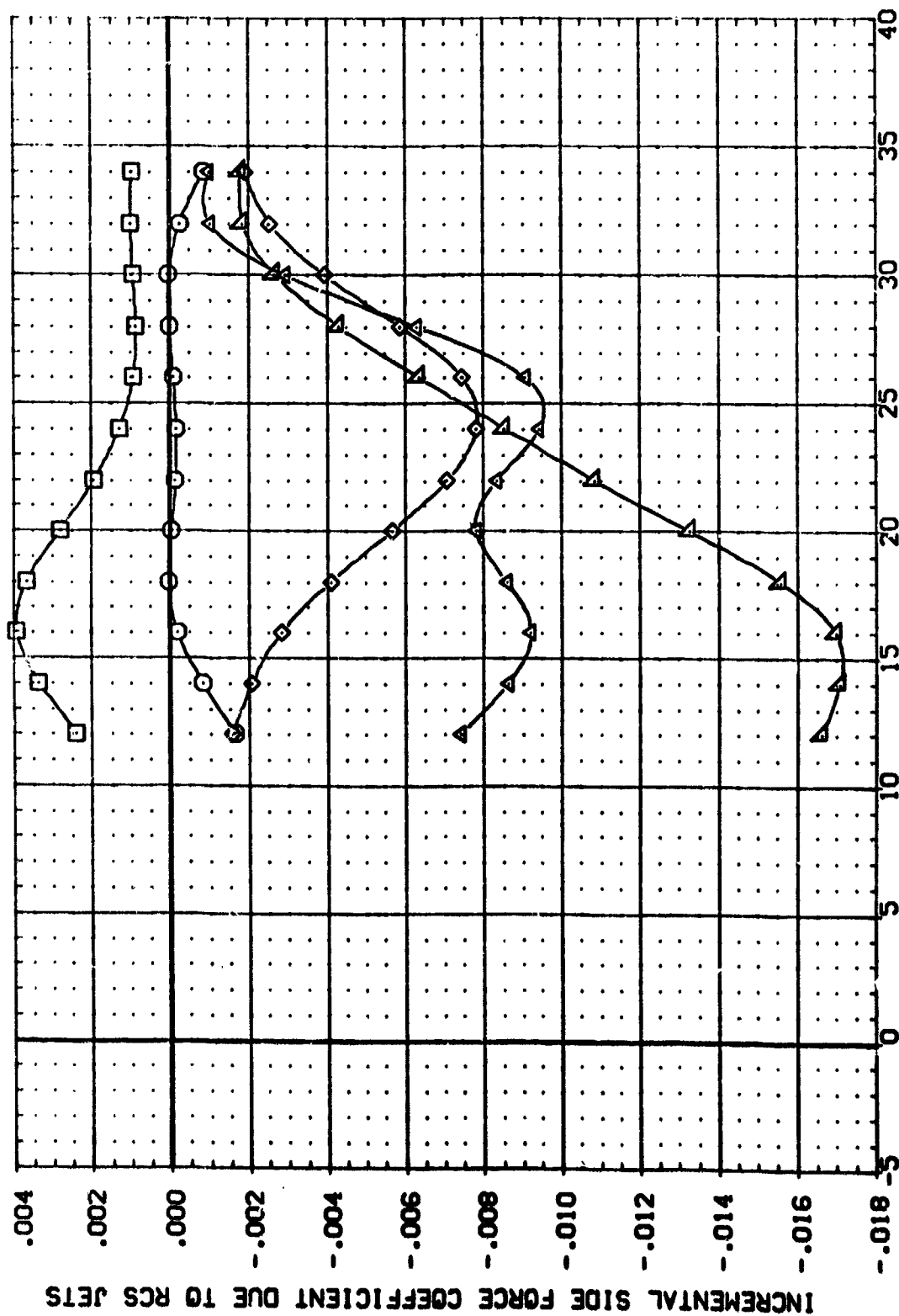
(A)MACH = 4.00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(AP045)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF. BVTN4	.000	37.000	1.000	SREF .7245 52. FT.
(AP046)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF. BVTN4	.000	99.000	1.000	LREF 7.6828 10. FT.
(AP049)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF. BVTN4	.000	199.000	1.000	BREF 15.1152 10. FT.
(AP050)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF. BVTN4	.000	328.000	1.000	XREF 12.9510 10. FT.
(AP054)	MA-7, UPVT 1031, ROCKVELL PRR CR8, CONF. BVTN4	.000	600.000	1.000	YREF .0000 10. FT.
					ZREF .0000 10. FT.
					SCALE .0150

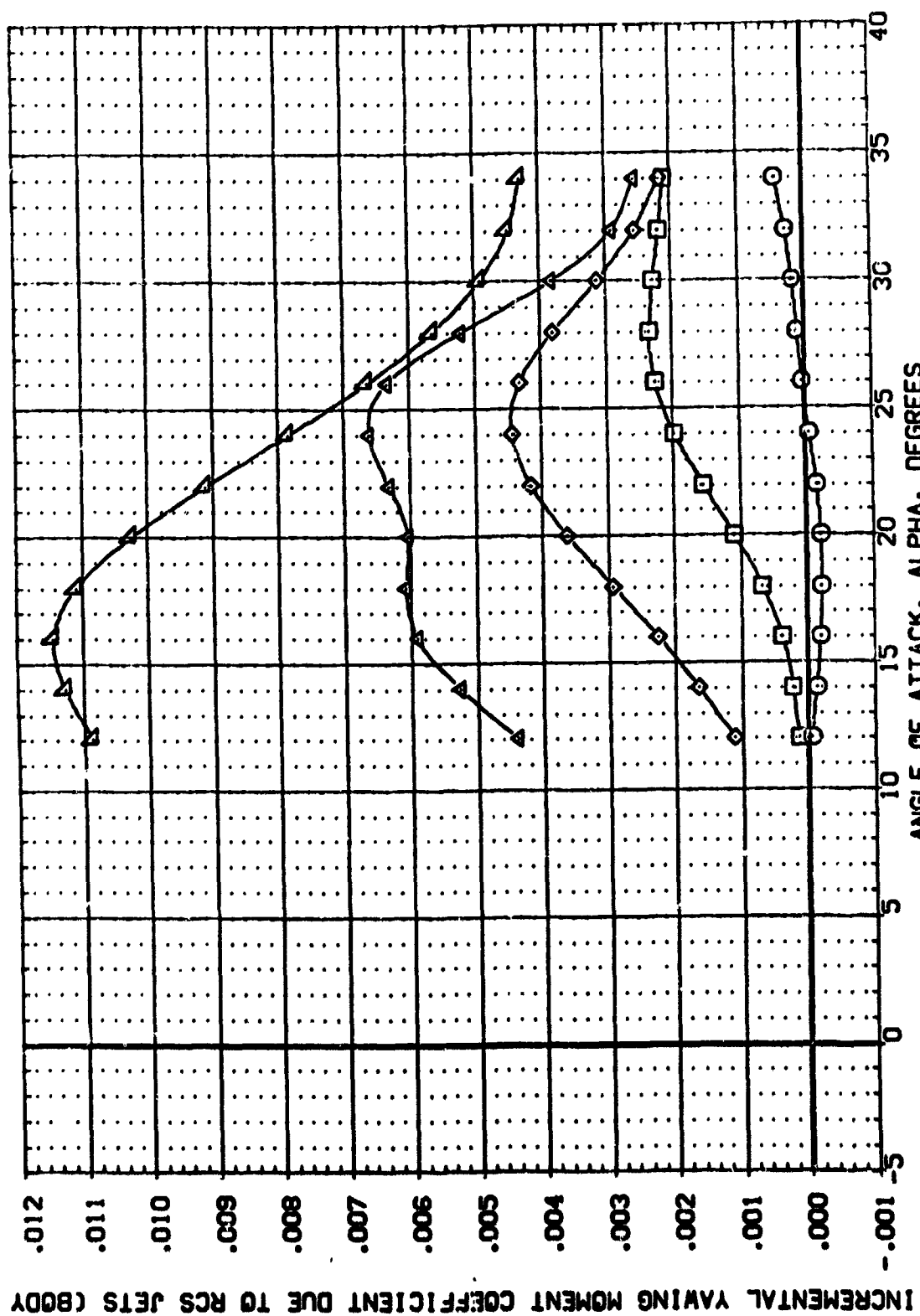


ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF  $\alpha$  ON SIDE FORCE PRESSURE

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CONF.	BVTN4	BETA	DLPO-J	RM/L	REFERENCE INFORMATION
(APRO45)	MA-7, UPVT 1031, ROCKWELL PRR C08.	CONF.	BVTN4	.000	37.000	1.000	SREF 7245 SQ.FT.
(APRO46)	MA-7, UPVT 1031, ROCKWELL PRR C08.	CONF.	BVTN4	.000	59.000	1.000	LREF 7.8828 INCHES
(APRO47)	MA-7, UPVT 1031, ROCKWELL PRR C08.	CONF.	BVTN4	.000	199.000	1.000	BREF 15.1152 INCHES
(APRO48)	MA-7, UPVT 1031, ROCKWELL PRR C08.	CONF.	BVTN4	.000	328.000	1.000	XREF 12.9510 INCHES
(APRO49)	MA-7, UPVT 1031, ROCKWELL PRR C08.	CONF.	BVTN4	.000	600.000	1.000	YREF 6.0000 INCHES
(APRO50)	MA-7, UPVT 1031, ROCKWELL PRR C08.	CONF.	BVTN4	.000	600.000	1.000	ZREF 6.0000 INCHES
(APRO51)	MA-7, UPVT 1031, ROCKWELL PRR C08.	CONF.	BVTN4	.000	600.000	1.000	SCALE .0150

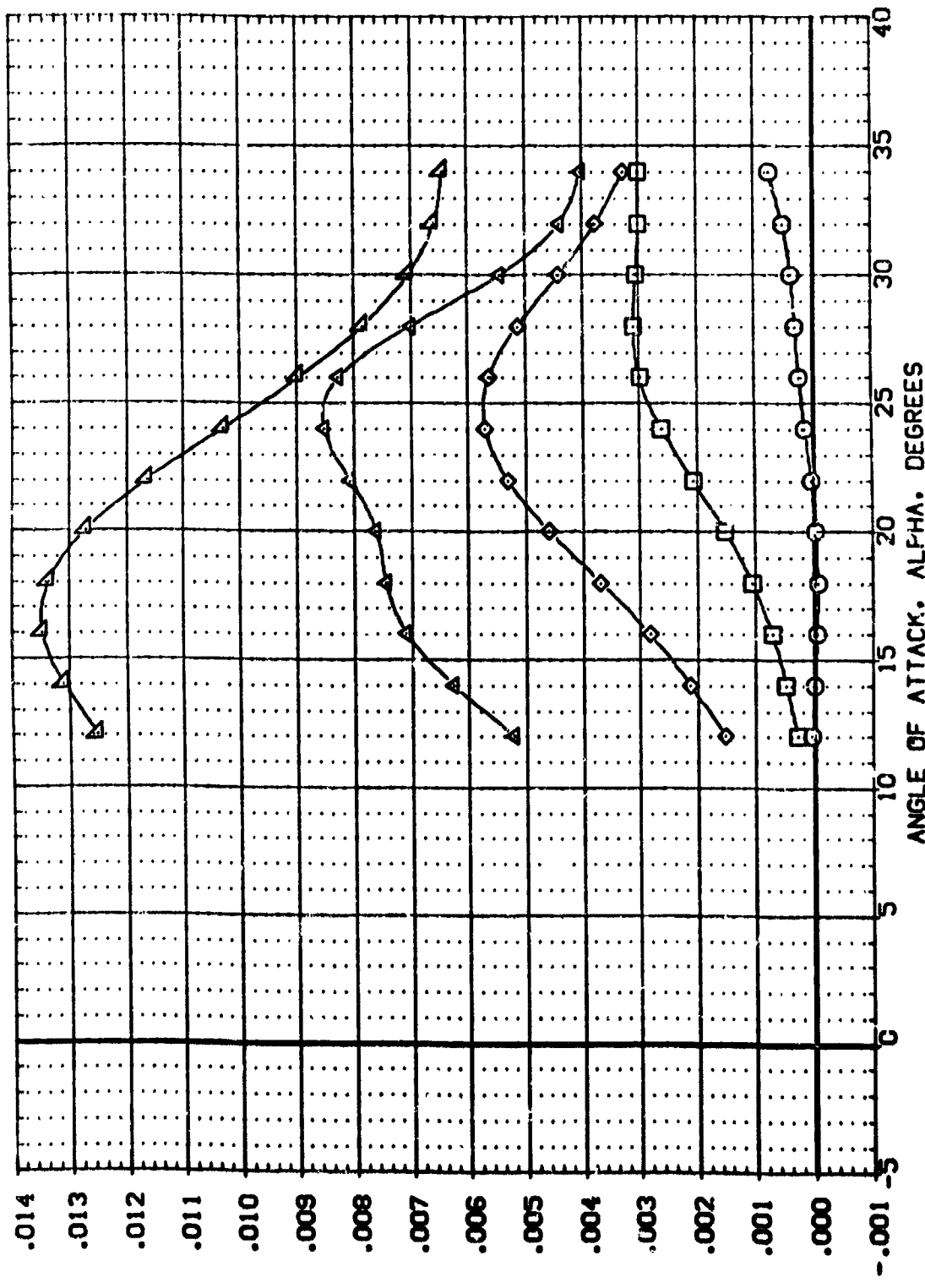


ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET NOZZLE PRESSURE

(A)MACH = 4.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA DLPO-J RV/L REFERENCE INFORMATION

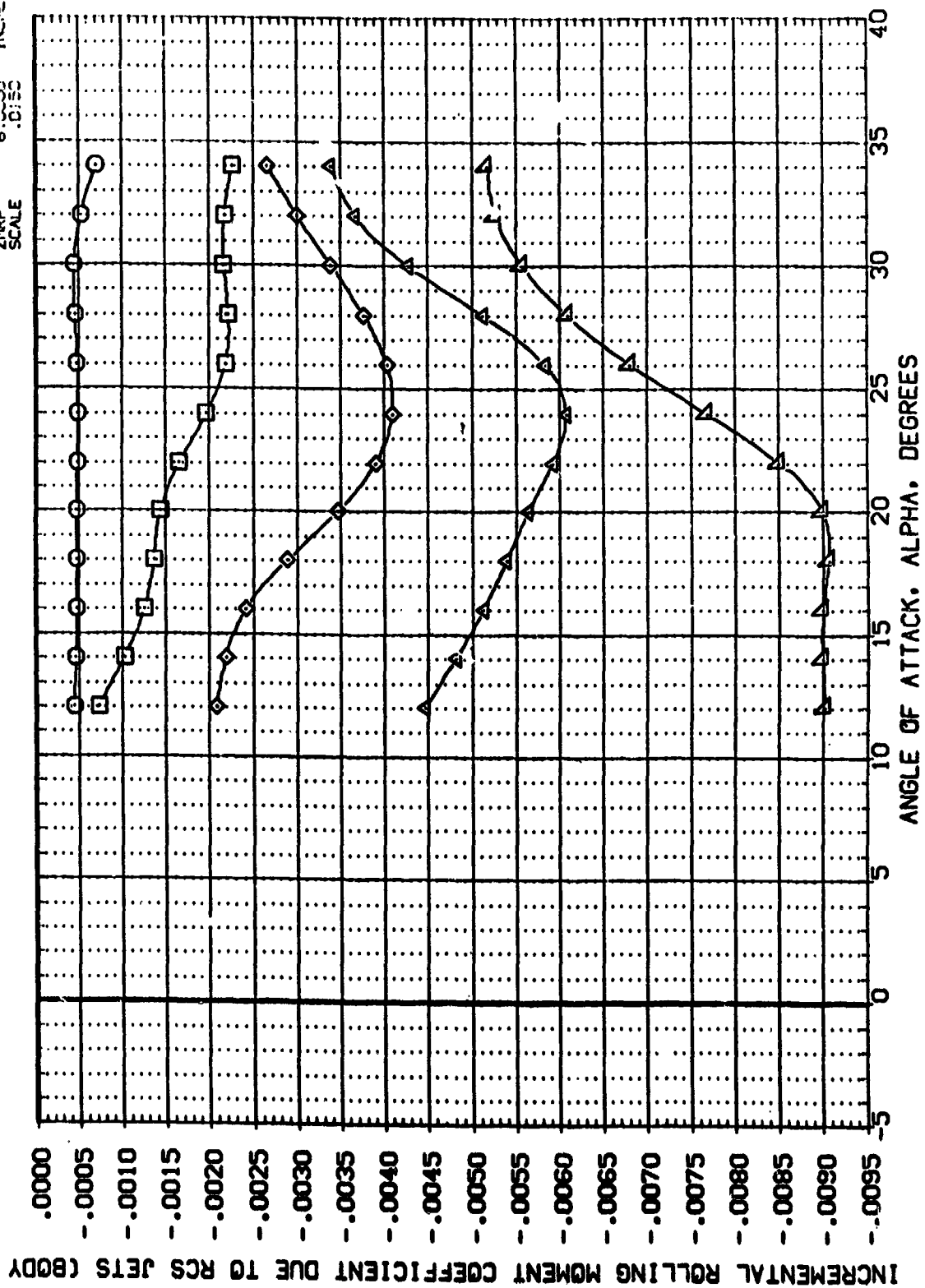
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RV/L	REFERENCE INFORMATION
(APR045)	MA-7-UPVT 1031-ROCKWELL PRR CRB	.000	37.070	1.000	SREF 7245 SQ.FT. INCHES
(APR046)	MA-7-UPVT 1031-ROCKWELL PRR CRB	.000	99.000	1.000	LREF 7.8828 INCHES
(APR047)	MA-7-UPVT 1031-ROCKWELL PRR CRB	.000	180.000	1.000	EREF 15.1152 INCHES
(APR048)	MA-7-UPVT 1031-ROCKWELL PRR CRB	.000	328.000	1.000	XREF 12.9510 INCHES
(APR049)	MA-7-UPVT 1031-ROCKWELL PRR CRB	.000	600.000	1.000	YREF .0000 INCHES
(APR050)	MA-7-UPVT 1031-ROCKWELL PRR CRB	.000	600.000	1.000	ZREF .0000 INCHES
(APR051)	MA-7-UPVT 1031-ROCKWELL PRR CRB	.000	600.000	1.000	SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET NOZZLE PRESSURE

(A)MACH = 4.00

DATA SET SYMBO: (APMD45) (APMD46) (APMD49) (APMD50) (APMD54)  
 CONFIGURATION DESCRIPTION: MA-7:UPVT 1031:ROCKWELL PRR ORB. CONF. BVTN4 BVTN4 BVTN4 BVTN4  
 BETA: .000 .000 .000 .000 .000  
 DLPO-J: 37.000 99.000 99.000 328.000 600.000  
 RNL: 1.000 1.000 1.000 1.000 1.000  
 REFERENCE INFORMATION: SREF 7.7245 SC.FT. 7245  
 LREF 7.6826 INCHES 6826  
 BREF 15.1152 INCHES 1152  
 YMRP 12.9510 INCHES 9510  
 ZMRP .0000 INCHES 0000  
 SCALE 6.0150 INCHES 0150

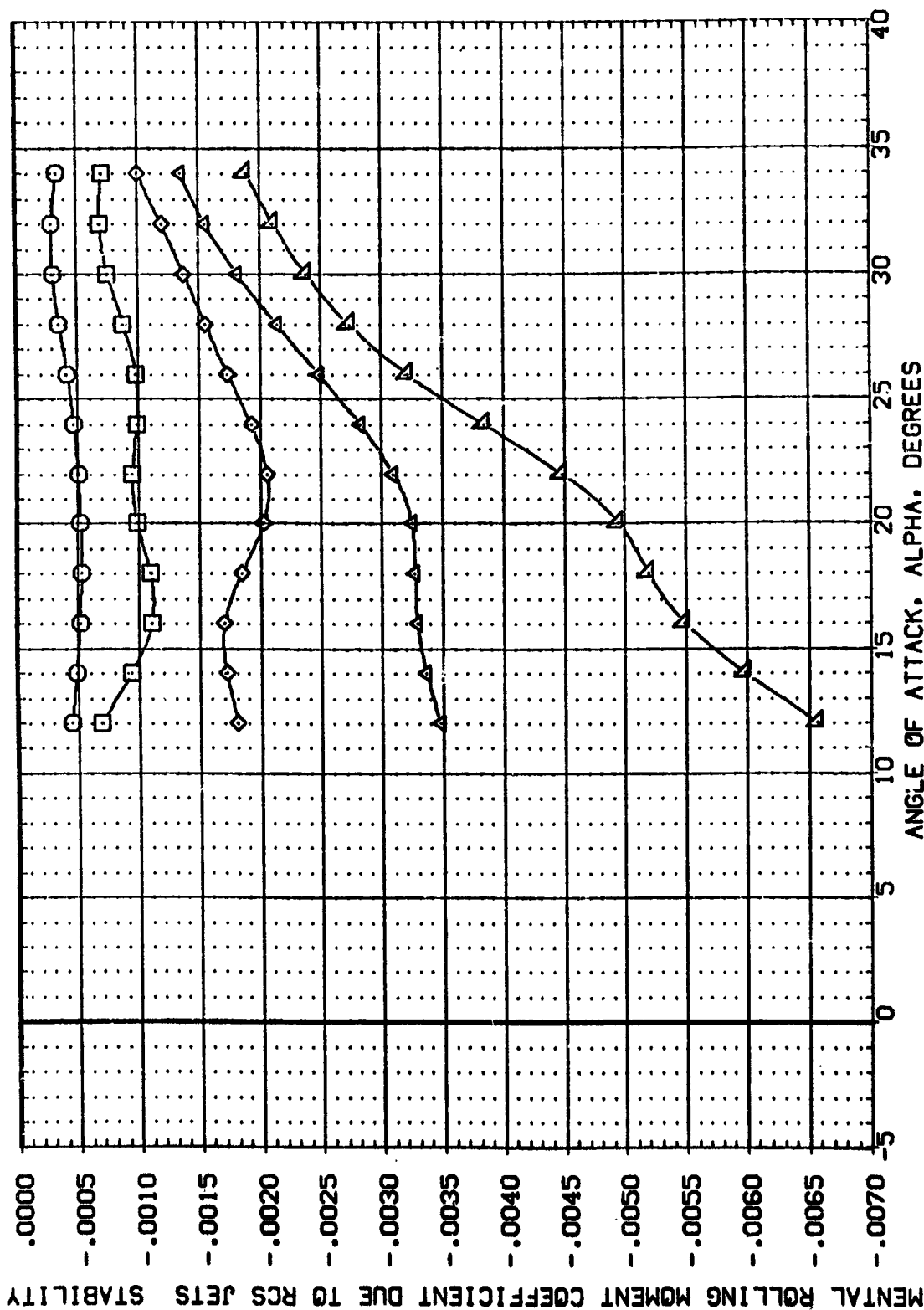


ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET NOZZLE PRESSURE

(A)MACH = 4.00

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS STABILITY AXIS

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	FN/L	REFERENCE INFORMATION
(APD045)	MA-7-UPVT 1031-ROCKVELL PRR CR8. CONF.	.000	37.000	1.000	SREF 7245 SQ.FT.
(APD046)	MA-7-UPVT 1031-ROCKVELL PRR CR8. CONF.	.000	99.000	1.000	LREF 7.8928 INCHES
(APD049)	MA-7-UPVT 1031-ROCKVELL PRR CR8. CONF.	.000	159.000	1.000	BREF 15.1152 INCHES
(APD050)	MA-7-UPVT 1031-ROCKVELL PRR CR8. CONF.	.000	328.000	1.000	XMRP 12.9510 INCHES
(APD054)	MA-7-UPVT 1031-ROCKVELL PRR CR8. CONF.	.000	600.000	1.000	YMRP 6.0000 INCHES
					SCALE .0150



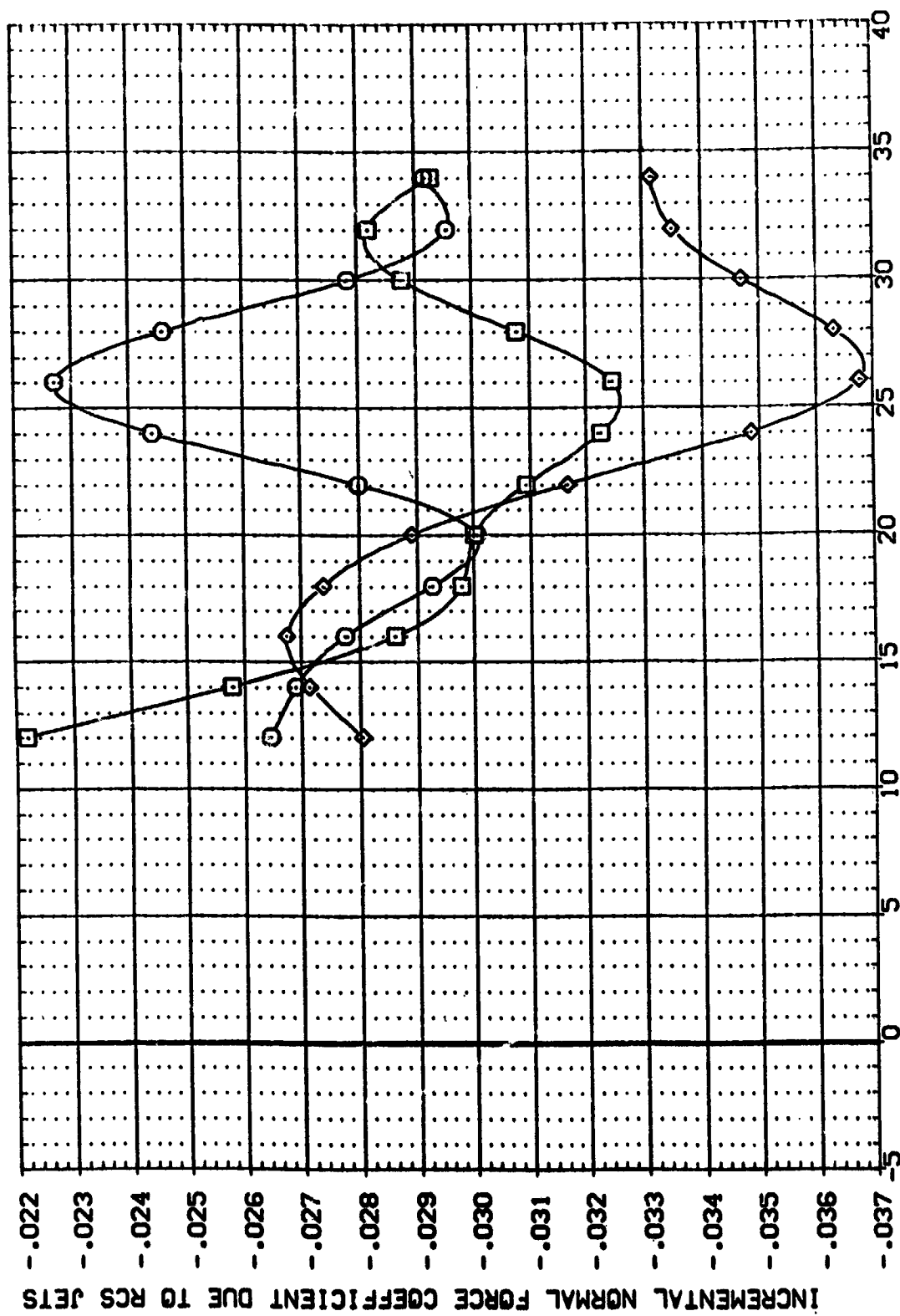
ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF JET NOZZLE PRESSURE

(M)MACH = 4.00



DATA SET SYMBOL      CONFIGURATION DESCRIPTION      BETA      DLPO-J      RV/L      REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RV/L	REFERENCE INFORMATION
(APM050)	MA-7.0PVT 1031. ROCKWELL PRR ORB. CONF.	.000	328.000	1.000	SREF .7245 SO.FT.
(APM051)	MA-7.0PVT 1031. ROCKWELL PRR ORB. CONF.	-2.500	328.000	1.000	LREF 7.8928 INCHES
(APM052)	MA-7.0PVT 1031. ROCKWELL PRR ORB. CONF.	-5.000	328.000	1.000	BREF 15.1152 INCHES
					YPRP 12.9510 INCHES
					ZPRP 10.0000 INCHES
					SCALE 6.0000 INCHES
					SCALE .0150

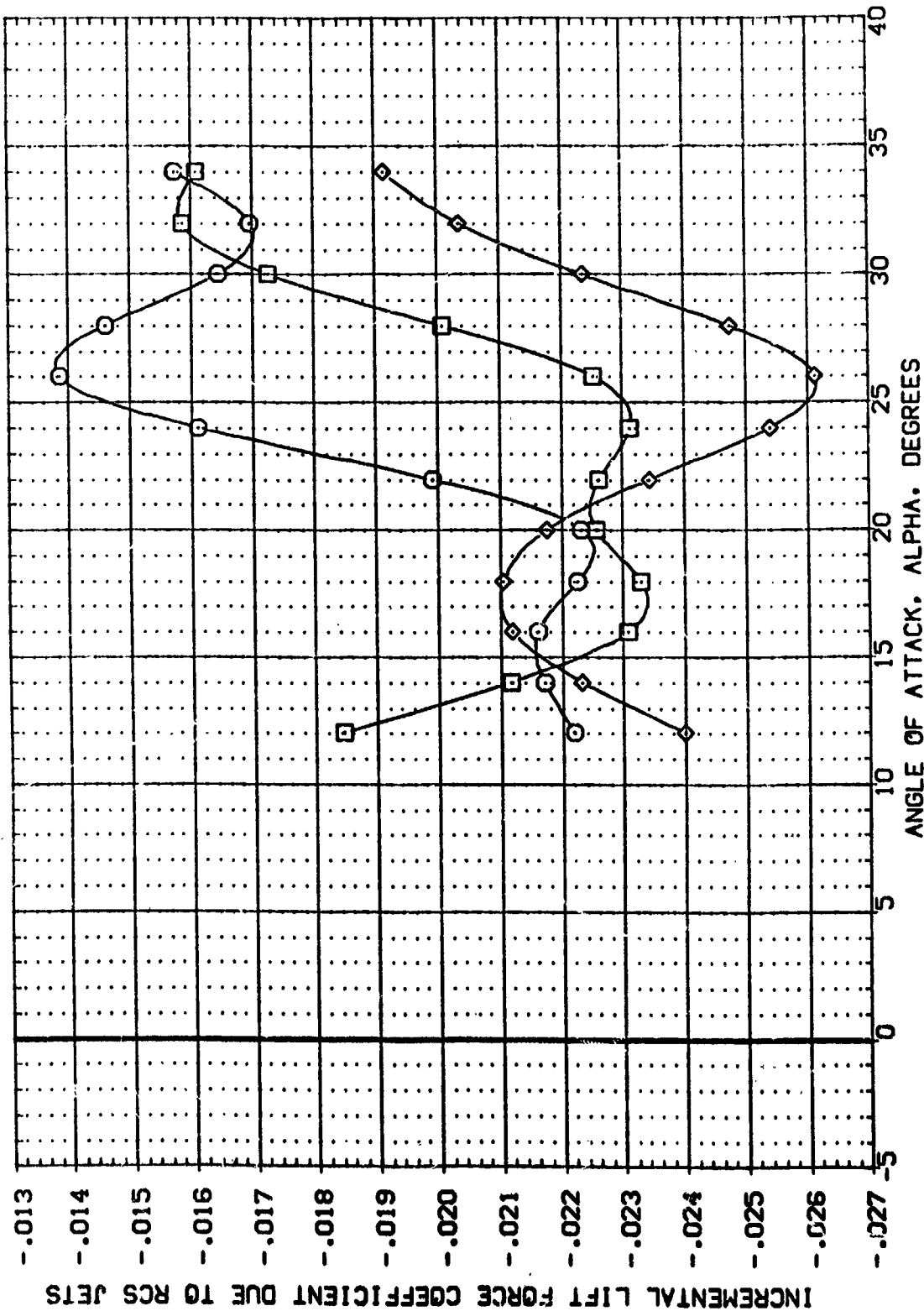


ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECTIVENESS IN SIDESLIP

(M)MACH = 4.00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA		DLPO-J		RN/L		REFERENCE INFORMATION		
(AP050)	MA-7, UPVT	1031, ROCKWELL	PR3	OR8	CONF	BVTN4	CONF	BVTN4	CONF	SREF	7245	50 FT.
(AP051)	MA-7, UPVT	1031, ROCKWELL	PR3	OR8	CONF	BVTN4	CONF	BVTN4	CONF	LREF	7.8828	INCHES
(AP052)	MA-7, UPVT	1031, ROCKWELL	PR3	OR8	CONF	BVTN4	CONF	BVTN4	CONF	BREF	15.1152	INCHES
										XREF	12.9510	INCHES
										YREF	6.0000	INCHES
										ZREF	6.0000	INCHES
										SCALE	.0150	



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECTIVENESS IN SIDESLIP

(M)MACH = 4.00

DATA SET SYMBOLS  
 (APROG)  
 (APROG1)  
 (APROG2)

CONFIGURATION DESCRIPTION  
 MA-7-LPVT 1031-ROCKWELL PRR ORB. CONF.  
 MA-7-LPVT 1031-ROCKWELL PRR ORB. CONF.  
 MA-7-LPVT 1031-ROCKWELL PRR ORB. CONF.

BETA DLPO-J RVL  
 .000 328.000  
 -2.500 328.000  
 -5.000 328.000

BVTM4  
 BVTM4  
 BVTM4

ORB. CONF.  
 ORB. CONF.  
 ORB. CONF.

ORB. CONF.  
 ORB. CONF.  
 ORB. CONF.

ORB. CONF.  
 ORB. CONF.  
 ORB. CONF.

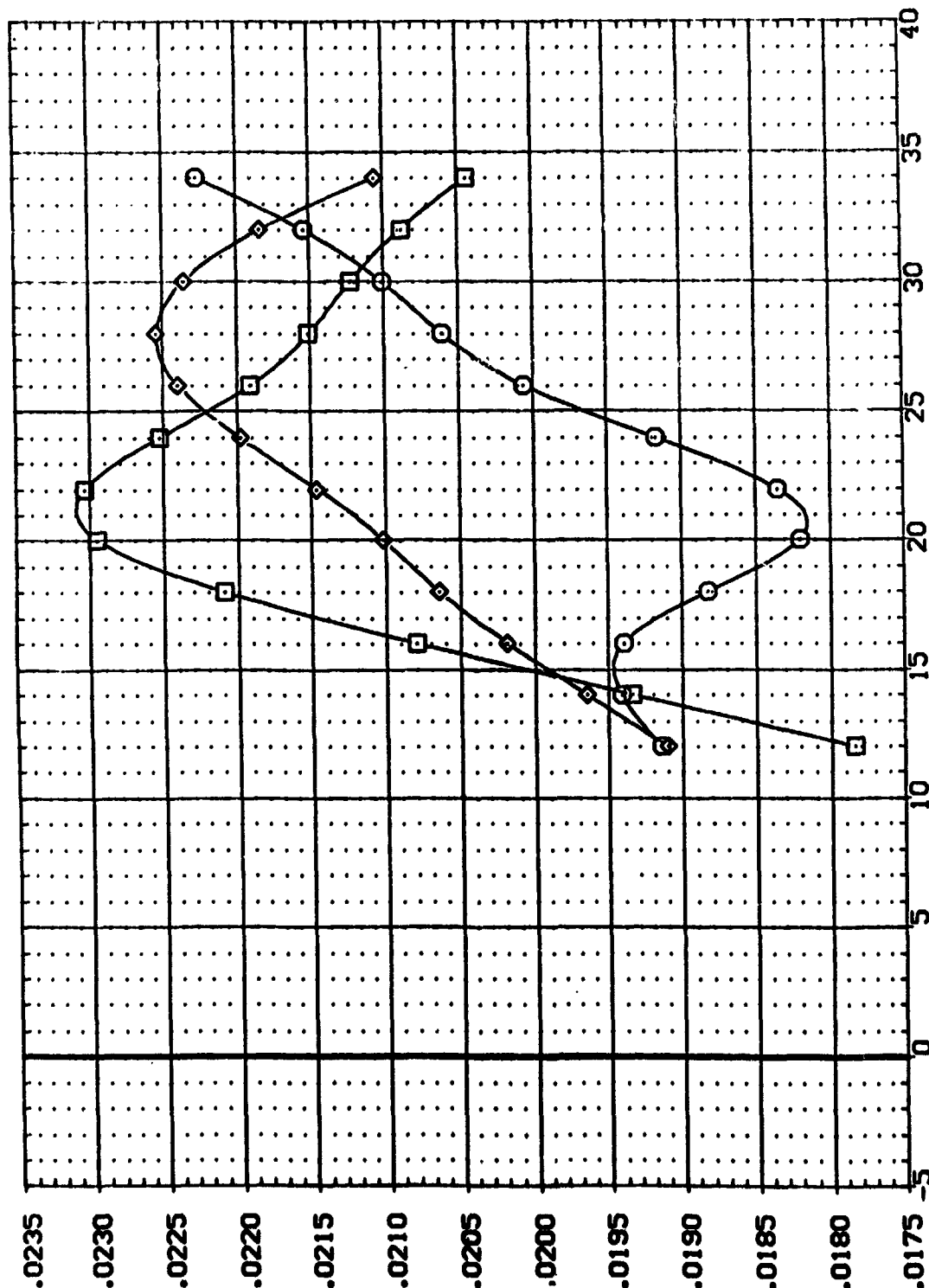
ORB. CONF.  
 ORB. CONF.  
 ORB. CONF.

ORB. CONF.  
 ORB. CONF.  
 ORB. CONF.

ORB. CONF.  
 ORB. CONF.  
 ORB. CONF.

ORB. CONF.  
 ORB. CONF.  
 ORB. CONF.

ORB. CONF.  
 ORB. CONF.  
 ORB. CONF.



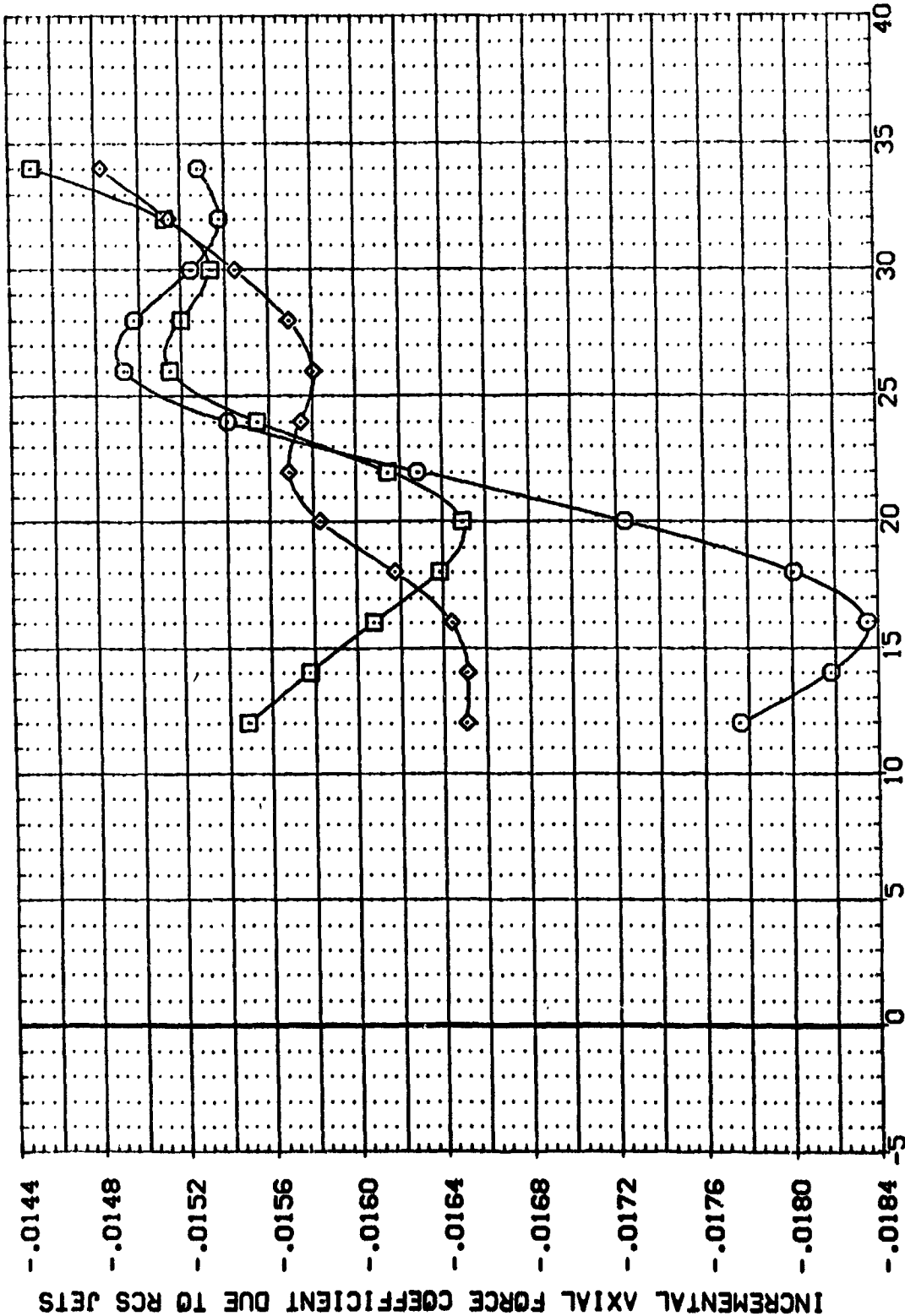
ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECTIVENESS IN SIDESLIP

(A) MACH = 4.00



DATA SET SYMBOL: (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z) (AA) (AB) (AC) (AD) (AE) (AF) (AG) (AH) (AI) (AJ) (AK) (AL) (AM) (AN) (AO) (AP) (AQ) (AR) (AS) (AT) (AU) (AV) (AW) (AX) (AY) (AZ) (BA) (BB) (BC) (BD) (BE) (BF) (BG) (BH) (BI) (BJ) (BK) (BL) (BM) (BN) (BO) (BP) (BQ) (BR) (BS) (BT) (BU) (BV) (BW) (BX) (BY) (BZ) (CA) (CB) (CC) (CD) (CE) (CF) (CG) (CH) (CI) (CJ) (CK) (CL) (CM) (CN) (CO) (CP) (CQ) (CR) (CS) (CT) (CU) (CV) (CW) (CX) (CY) (CZ) (DA) (DB) (DC) (DD) (DE) (DF) (DG) (DH) (DI) (DJ) (DK) (DL) (DM) (DN) (DO) (DP) (DQ) (DR) (DS) (DT) (DU) (DV) (DW) (DX) (DY) (DZ) (EA) (EB) (EC) (ED) (EE) (EF) (EG) (EH) (EI) (EJ) (EK) (EL) (EM) (EN) (EO) (EP) (EQ) (ER) (ES) (ET) (EU) (EV) (EW) (EX) (EY) (EZ) (FA) (FB) (FC) (FD) (FE) (FF) (FG) (FH) (FI) (FJ) (FK) (FL) (FM) (FN) (FO) (FP) (FQ) (FR) (FS) (FT) (FU) (FV) (FW) (FX) (FY) (FZ) (GA) (GB) (GC) (GD) (GE) (GF) (GG) (GH) (GI) (GJ) (GK) (GL) (GM) (GN) (GO) (GP) (GQ) (GR) (GS) (GT) (GU) (GV) (GW) (GX) (GY) (GZ) (HA) (HB) (HC) (HD) (HE) (HF) (HG) (HH) (HI) (HJ) (HK) (HL) (HM) (HN) (HO) (HP) (HQ) (HR) (HS) (HT) (HU) (HV) (HW) (HX) (HY) (HZ) (IA) (IB) (IC) (ID) (IE) (IF) (IG) (IH) (II) (IJ) (IK) (IL) (IM) (IN) (IO) (IP) (IQ) (IR) (IS) (IT) (IU) (IV) (IW) (IX) (IY) (IZ) (JA) (JB) (JC) (JD) (JE) (JF) (JG) (JH) (JI) (JJ) (JK) (JL) (JM) (JN) (JO) (JP) (JQ) (JR) (JS) (JT) (JU) (JV) (JW) (JX) (JY) (JZ) (KA) (KB) (KC) (KD) (KE) (KF) (KG) (KH) (KI) (KJ) (KK) (KL) (KM) (KN) (KO) (KP) (KQ) (KR) (KS) (KT) (KU) (KV) (KW) (KX) (KY) (KZ) (LA) (LB) (LC) (LD) (LE) (LF) (LG) (LH) (LI) (LJ) (LK) (LL) (LM) (LN) (LO) (LP) (LQ) (LR) (LS) (LT) (LU) (LV) (LW) (LX) (LY) (LZ) (MA) (MB) (MC) (MD) (ME) (MF) (MG) (MH) (MI) (MJ) (MK) (ML) (MM) (MN) (MO) (MP) (MQ) (MR) (MS) (MT) (MU) (MV) (MW) (MX) (MY) (MZ) (NA) (NB) (NC) (ND) (NE) (NF) (NG) (NH) (NI) (NJ) (NK) (NL) (NM) (NN) (NO) (NP) (NQ) (NR) (NS) (NT) (NU) (NV) (NW) (NX) (NY) (NZ) (OA) (OB) (OC) (OD) (OE) (OF) (OG) (OH) (OI) (OJ) (OK) (OL) (OM) (ON) (OO) (OP) (OQ) (OR) (OS) (OT) (OU) (OV) (OW) (OX) (OY) (OZ) (PA) (PB) (PC) (PD) (PE) (PF) (PG) (PH) (PI) (PJ) (PK) (PL) (PM) (PN) (PO) (PP) (PQ) (PR) (PS) (PT) (PU) (PV) (PW) (PX) (PY) (PZ) (QA) (QB) (QC) (QD) (QE) (QF) (QG) (QH) (QI) (QJ) (QK) (QL) (QM) (QN) (QO) (QP) (QQ) (QR) (QS) (QT) (QU) (QV) (QW) (QX) (QY) (QZ) (RA) (RB) (RC) (RD) (RE) (RF) (RG) (RH) (RI) (RJ) (RK) (RL) (RM) (RN) (RO) (RP) (RQ) (RR) (RS) (RT) (RU) (RV) (RW) (RX) (RY) (RZ) (SA) (SB) (SC) (SD) (SE) (SF) (SG) (SH) (SI) (SJ) (SK) (SL) (SM) (SN) (SO) (SP) (SQ) (SR) (SS) (ST) (SU) (SV) (SW) (SX) (SY) (SZ) (TA) (TB) (TC) (TD) (TE) (TF) (TG) (TH) (TI) (TJ) (TK) (TL) (TM) (TN) (TO) (TP) (TQ) (TR) (TS) (TT) (TU) (TV) (TW) (TX) (TY) (TZ) (UA) (UB) (UC) (UD) (UE) (UF) (UG) (UH) (UI) (UJ) (UK) (UL) (UM) (UN) (UO) (UP) (UQ) (UR) (US) (UT) (UU) (UV) (UW) (UX) (UY) (UZ) (VA) (VB) (VC) (VD) (VE) (VF) (VG) (VH) (VI) (VJ) (VK) (VL) (VM) (VN) (VO) (VP) (VQ) (VR) (VS) (VT) (VU) (VV) (VW) (VX) (VY) (VZ) (WA) (WB) (WC) (WD) (WE) (WF) (WG) (WH) (WI) (WJ) (WK) (WL) (WM) (WN) (WO) (WP) (WQ) (WR) (WS) (WT) (WU) (WV) (WW) (WX) (WY) (WZ) (XA) (XB) (XC) (XD) (XE) (XF) (XG) (XH) (XI) (XJ) (XK) (XL) (XM) (XN) (XO) (XP) (XQ) (XR) (XS) (XT) (XU) (XV) (XW) (XX) (XY) (XZ) (YA) (YB) (YC) (YD) (YE) (YF) (YG) (YH) (YI) (YJ) (YK) (YL) (YM) (YN) (YO) (YP) (YQ) (YR) (YS) (YT) (YU) (YV) (YW) (YX) (YY) (YZ) (ZA) (ZB) (ZC) (ZD) (ZE) (ZF) (ZG) (ZH) (ZI) (ZJ) (ZK) (ZL) (ZM) (ZN) (ZO) (ZP) (ZQ) (ZR) (ZS) (ZT) (ZU) (ZV) (ZW) (ZX) (ZY) (ZZ)



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECTIVENESS IN SIDESLIP

(A) MACH = 4.00



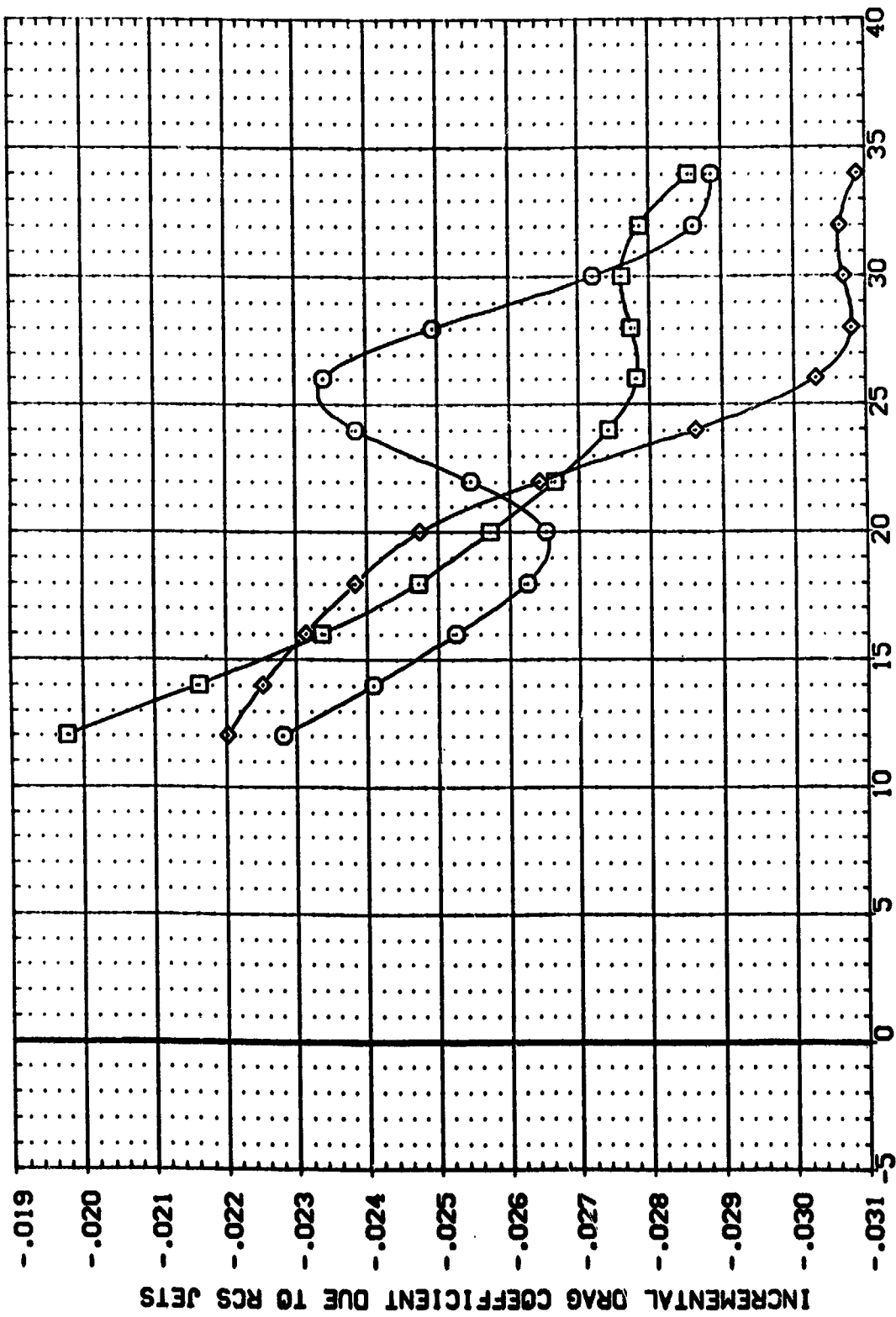
DATA SET SYMBOL: (APR050) (APR051) (APR052)

CONFIGURATION DESCRIPTION: MA-7-UPVT 1031, ROCKWELL PRR CRB: CONF: BVTN4 MA-7-UPVT 1031, ROCKWELL PRR CRB: CONF: BVTN4 MA-7-UPVT 1031, ROCKWELL PRR CRB: CONF: BVTN4

BETA: .000 328.000 -2.500 -5.000 328.000 328.000

DLP0-J: RV/L: 1.000 1.000 1.000

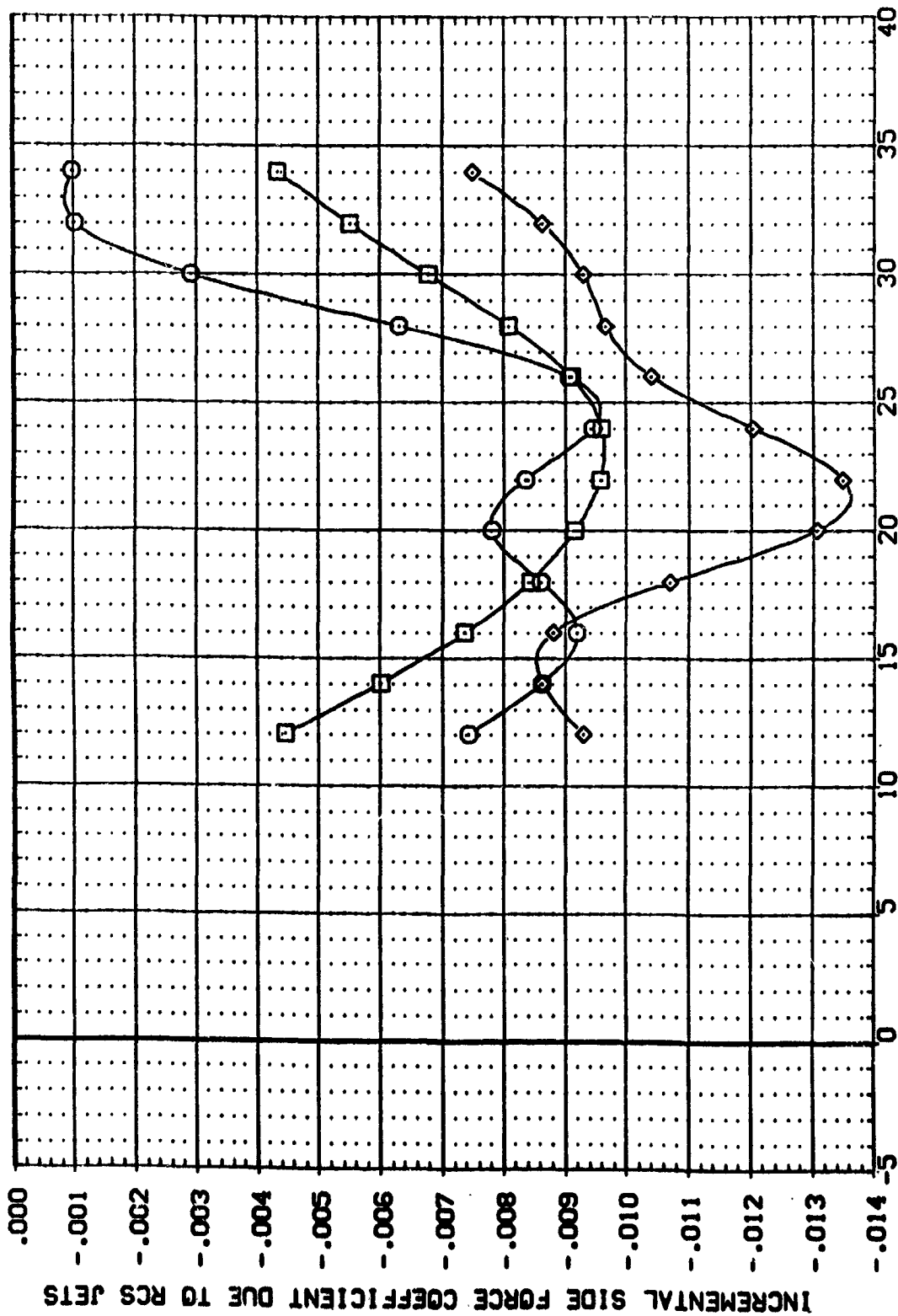
REFERENCE INFORMATION: SREF: 7245 50. FT. LREF: 7.8828 INCHES BREF: 15.1152 INCHES XMRP: 12.9510 INCHES YMRP: 10.0000 INCHES ZMRP: 6.0000 INCHES SCALE: .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECTIVENESS IN SIDESLIP

(A) MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	CLPO-J	RV/L	REFERENCE INFORMATION
(AP050)	MA-7, UPVT 1031, ROCKWELL PRR CRB. CONF.	.000	328.000	1.000	SREF .7245 SO. FT.
(AP051)	MA-7, UPVT 1031, ROCKWELL PRR CRB. CONF.	-2.500	328.000	1.000	LREI 7.8828 INCHES
(AP052)	MA-7, UPVT 1031, ROCKWELL PRR CRB. CONF.	-5.000	328.000	1.000	BREI 15.1152 INCHES
					XTRP 12.5510 INCHES
					YTRP .0000 INCHES
					ZTRP 6.0000 INCHES
					SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECTIVENESS IN SIDESLIP

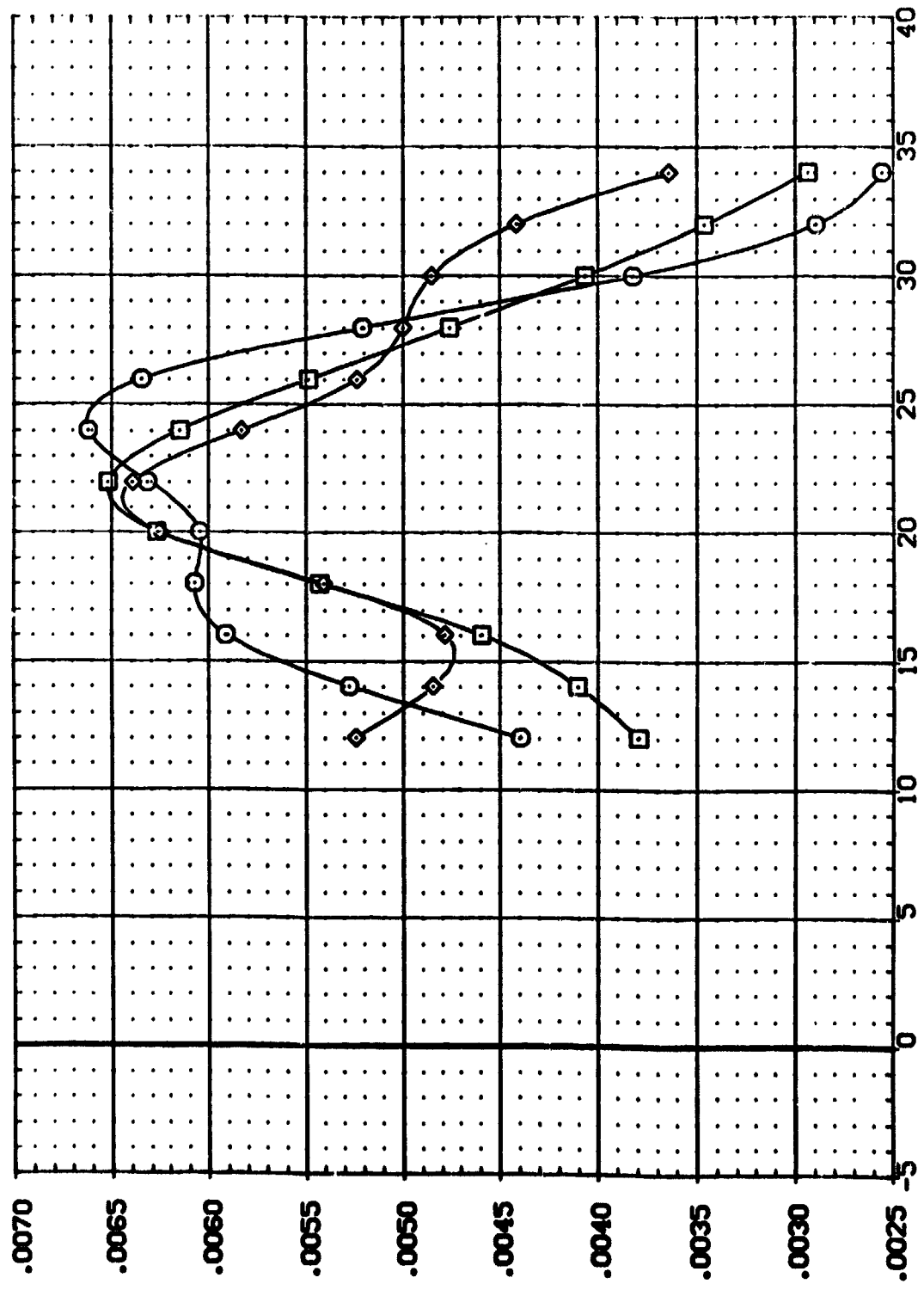
(A) MACH = 4.00

DATA SET SYMBOL: (APR050) MA-7.1PVT 1031. ROCKWELL PRR ORB. CONF. BVTM4  
 (APR051) MA-7.1PVT 1031. ROCKWELL PRR ORB. CONF. BVTM4  
 (APR052) MA-7.1PVT 1031. ROCKWELL PRR ORB. CONF. BVTM4

BETA: 0.00 328.000 1.000  
 DLPO-J: 0.00 328.000 1.000  
 RVL: 0.00 328.000 1.000

REFERENCE INFORMATION:  
 SREF: 7.7245 SC.FT.  
 LREF: 7.6828 SC.FT.  
 BREF: 15.1152 SC.FT.  
 XPRP: 12.6510 SC.FT.  
 YPRP: 0.0000 SC.FT.  
 ZPRP: 6.0000 SC.FT.  
 SCALE: 0.0150

INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (BODY AXIS)



ANGLE OF ATTACK, ALPHA, DEGREES  
 ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECTIVENESS IN SIDESLIP

CAJ MACH = 4.00

INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (STABILITY AXIS)

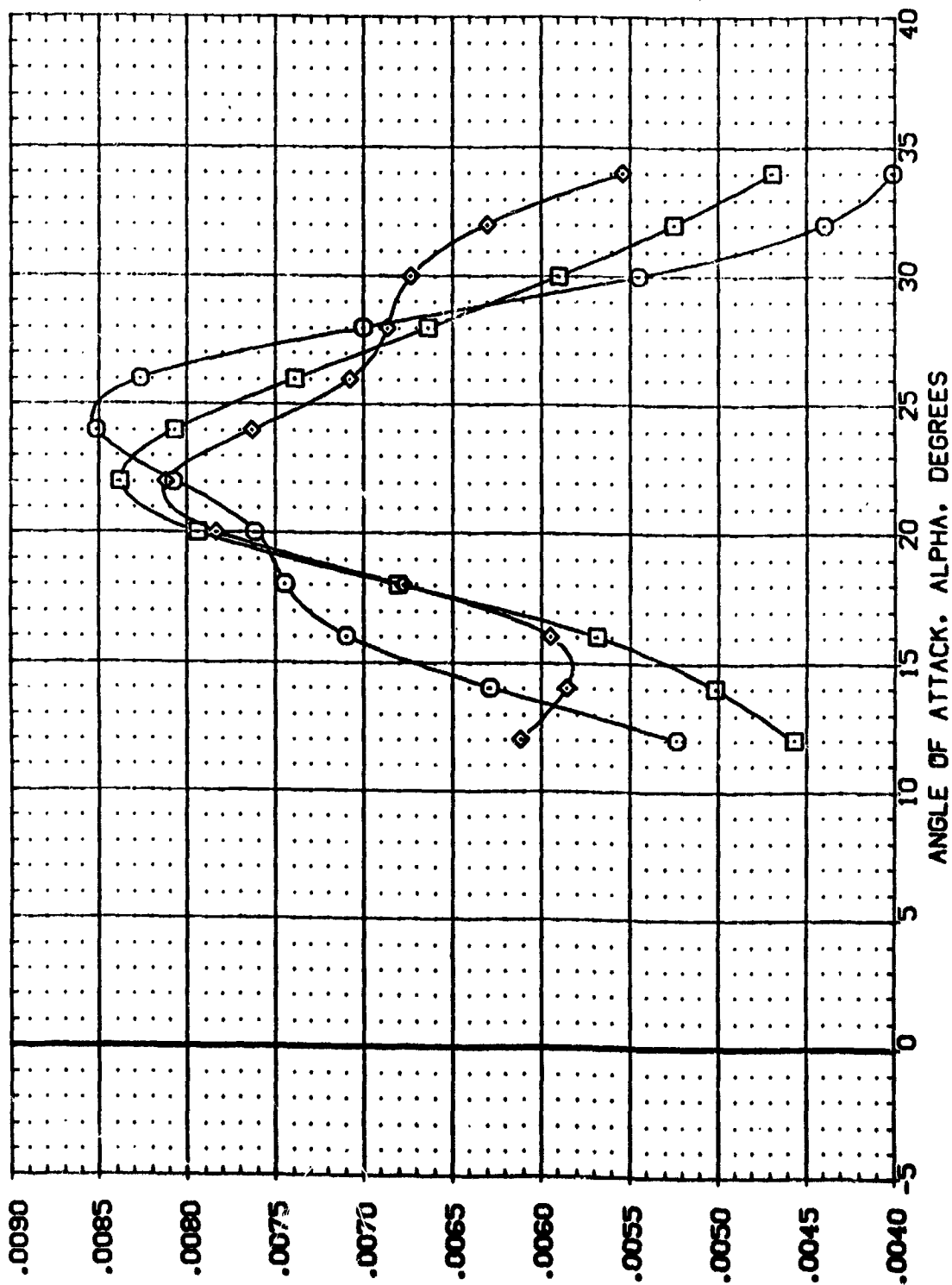
DATA SET SYMBOL: (AP050) (AP051) (AP052)

CONFIGURATION DESCRIPTION: MA-7,UPVT 1031,ROCKWELL PRR CRB. CONF. BVTN4  
 MA-7,UPVT 1031,ROCKWELL PRR CRB. CONF. BVTN4  
 MA-7,UPVT 1031,ROCKWELL PRR CRB. CONF. BVTN4

BETA: .000 328.000 1.000  
 -2.500 328.000 1.000  
 -5.000 328.000 1.000

DLPO-J: RV/L

REFERENCE INFORMATION: SREF: .7245 50. FT.  
 LREF: 7.8828 INCHES  
 BREF: 15.1152 INCHES  
 VMPP: 12.9510 INCHES  
 ZMPP: .0000 INCHES  
 SCALE: .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECTIVENESS IN SIDESLIP

(A)MACH = 4.00

REFERENCE INFORMATION

SREF	7.245	SG.FT.
LREF	7.8828	INCHES
BREF	15.1152	INCHES
XMRP	12.9510	INCHES
YMRP	0.0000	INCHES
ZMRP	6.0000	INCHES
SCALE	.0150	

BETA

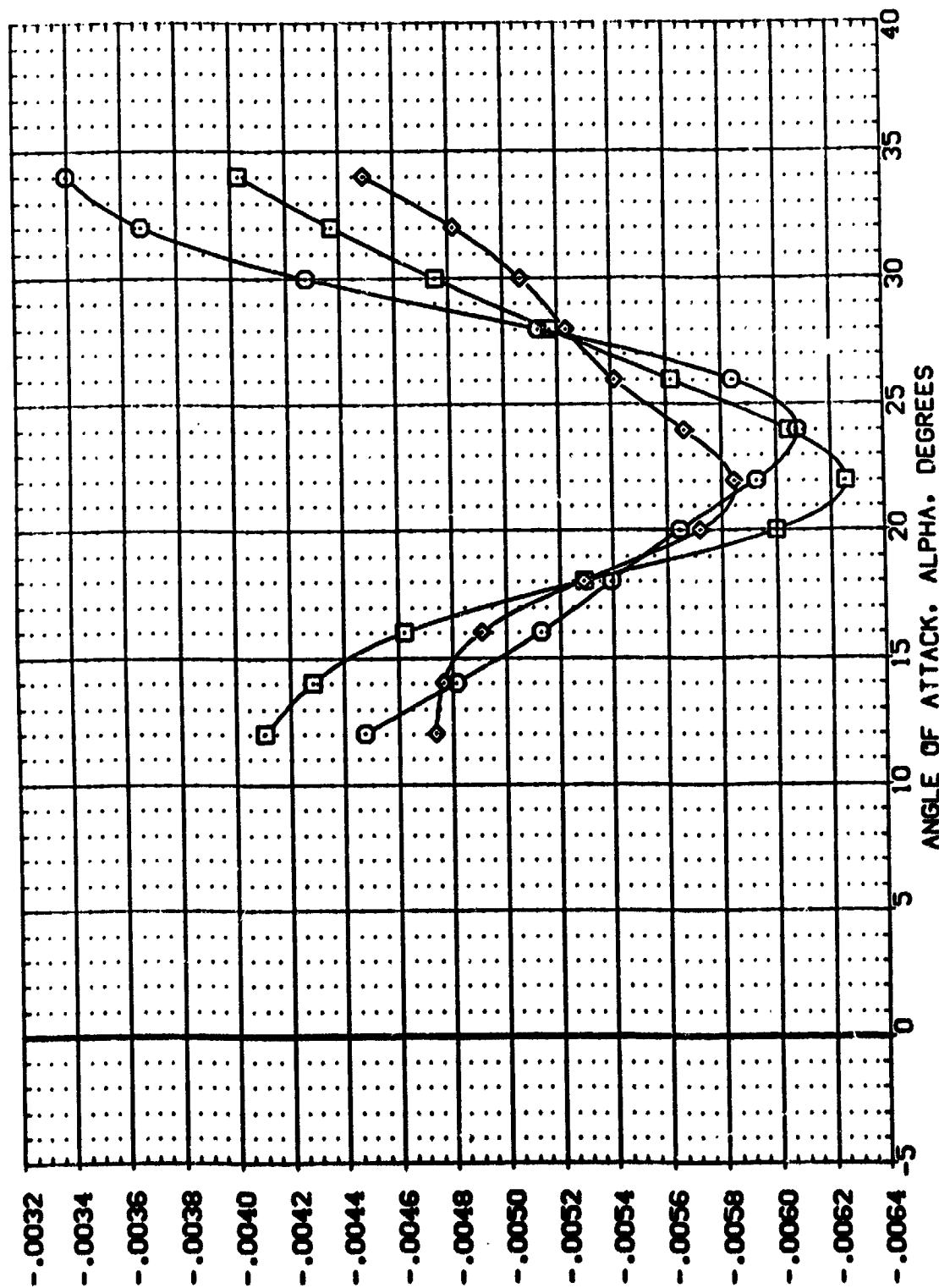
DLPO-J	RV/L
.000	1.000
-2.500	1.000
-5.000	1.000

DATA SET SYMBOL

MA-7-UPVT	1031-ROCKWELL	PER	CRB	CONF	BVTNA
MA-7-UPVT	1031-ROCKWELL	PER	CRB	CONF	BVTNA
MA-7-UPVT	1031-ROCKWELL	PER	CRB	CONF	BVTNA

CONFIGURATION DESCRIPTION

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS (BODY AXIS)



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECTIVENESS IN SIDESLIP

(A)MACH = 4.00

REFERENCE INFORMATION

SREF	7245	50 FT
LREF	7.8828	INCHES
BREF	15.1152	INCHES
XGRP	12.9510	INCHES
YGRP	0.0000	INCHES
ZGRP	6.0000	INCHES
SCALE	0.0150	

BETA

DLPO-J	RVL
.000	1.000
-2.500	1.000
-5.000	1.000

BVTM

BVTM
BVTM
BVTM

CONF

CONF
CONF
CONF

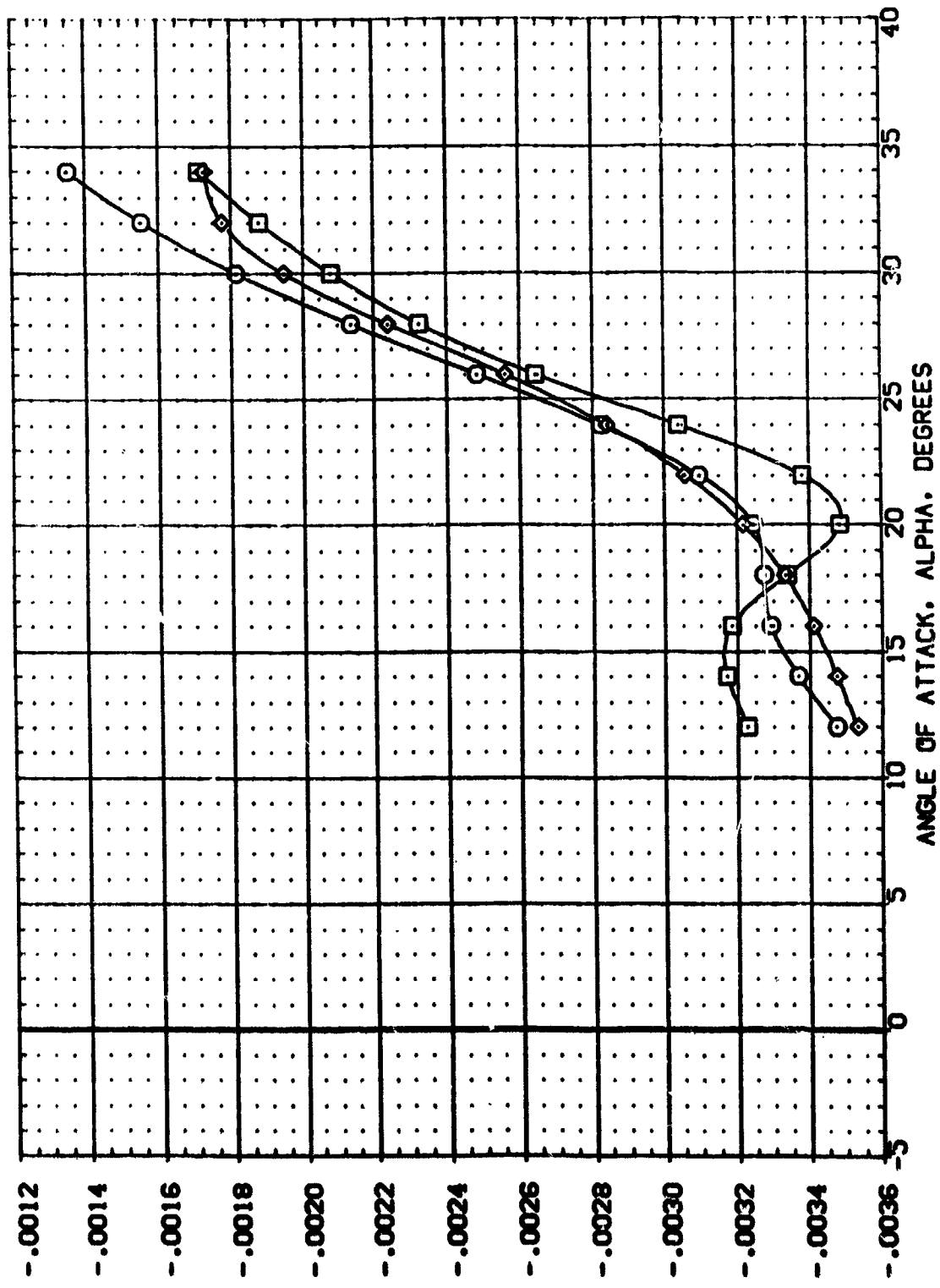
CONFIGURATION DESCRIPTION

MA-7.1PVT	1031	ROCNELL	PRR
MA-7.1PVT	1031	ROCNELL	PRR
MA-7.1PVT	1031	ROCNELL	PRR

DATA SET SYMBOL

(APR050)	
(APR051)	
(APR052)	

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS STABILITY AXIS



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECTIVENESS IN SIDESLIP

(A)MACH = 4.00

DATA SET SYMBOL: (AP045) (AP047) (AP048)

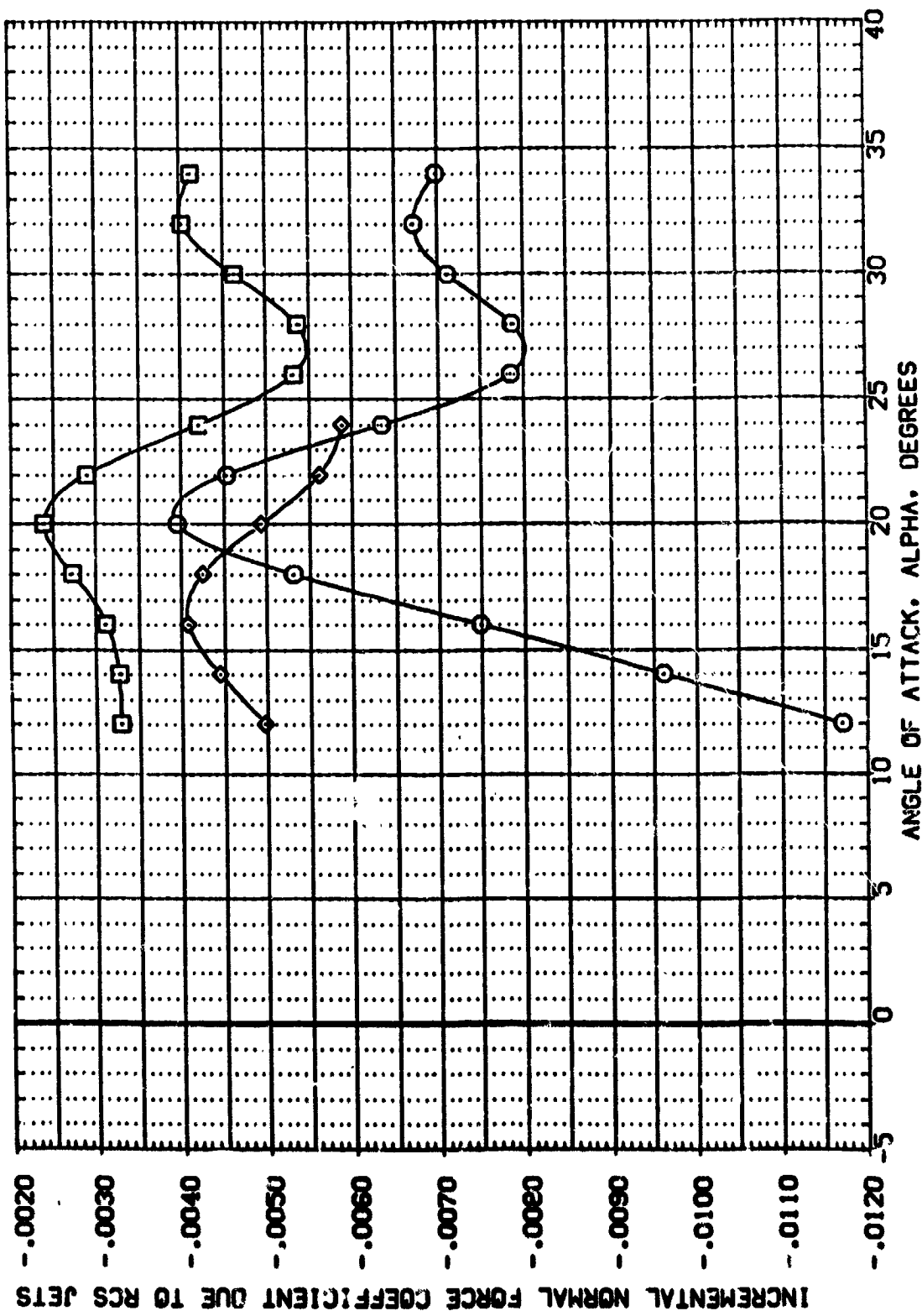
CONFIGURATION DESCRIPTION: MA-7-UPVT 1031:ROCKWELL PRR 038: CONF: (AP045) MA-7-UPVT 1031:ROCKWELL PRR 038: CONF: (AP047) MA-7-UPVT 1031:ROCKWELL PRR 038: CONF: (AP048)

BETA: .000 .000 .000

DLPO-J: 37.000 103.000 178.000

RV/L: 1.000 3.000 5.000

REFERENCE INFORMATION: SREF: 7245 50. FT. LREF: 7.8828 INCHES BREF: 15.1152 INCHES XREF: 12.9510 INCHES YREF: .0000 INCHES ZREF: 6.0000 INCHES SCALE: .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=4.5)

(A)MACH = 4.00



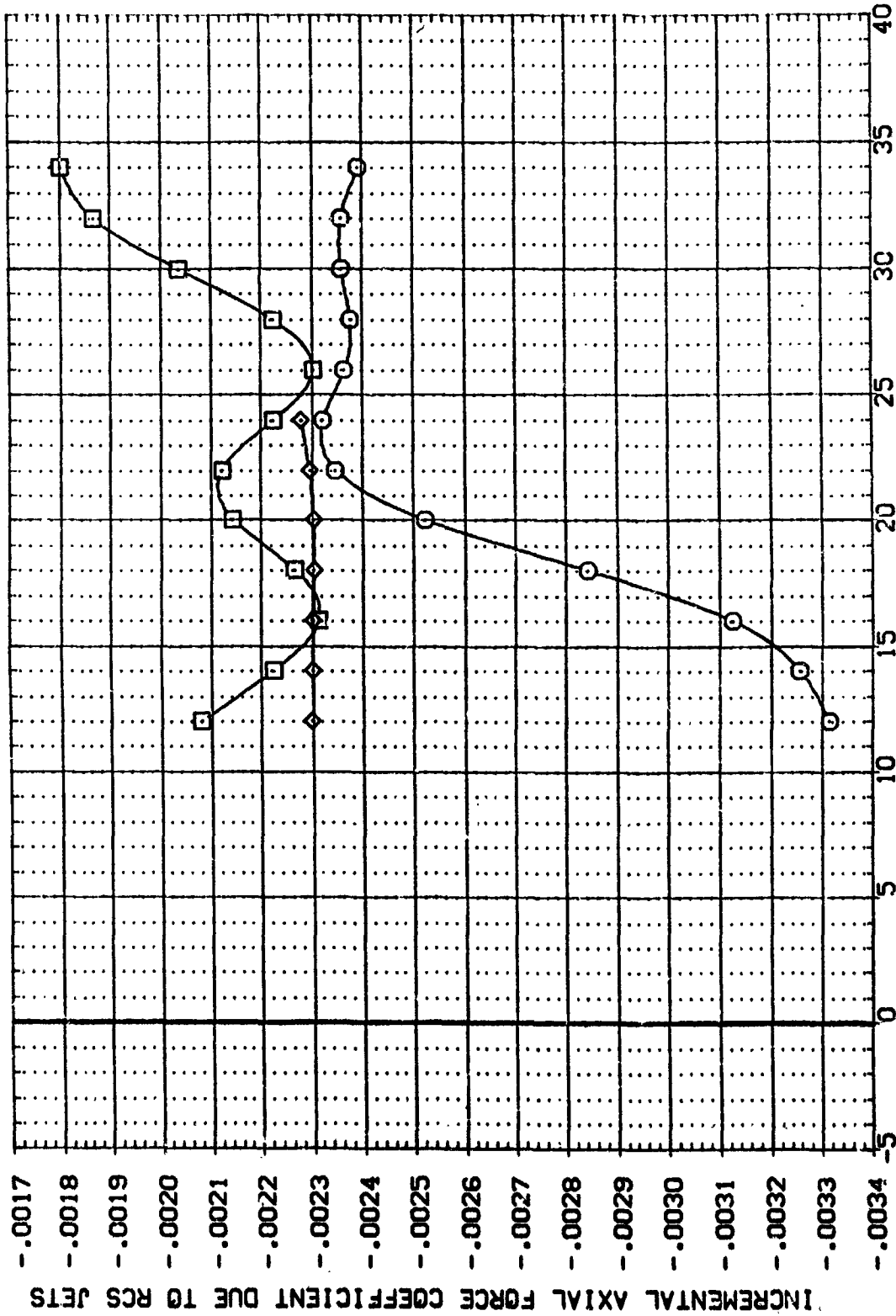
DATA SET SYMBOL: (AP045) (AP047) (AP048)

CONFIGURATION DESCRIPTION: MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: MA-7, SPVT 1031, ROCKWELL PRR 088, CONF:

BETA: 0.00 0.30 0.60 0.90 1.20 1.50 1.80 2.10 2.40 2.70 3.00 3.30 3.60 3.90 4.20 4.50 4.80 5.10 5.40 5.70 6.00 6.30 6.60 6.90 7.20 7.50 7.80 8.10 8.40 8.70 9.00 9.30 9.60 9.90 10.20 10.50 10.80 11.10 11.40 11.70 12.00 12.30 12.60 12.90 13.20 13.50 13.80 14.10 14.40 14.70 15.00 15.30 15.60 15.90 16.20 16.50 16.80 17.10 17.40 17.70 18.00 18.30 18.60 18.90 19.20 19.50 19.80 20.10 20.40 20.70 21.00 21.30 21.60 21.90 22.20 22.50 22.80 23.10 23.40 23.70 24.00 24.30 24.60 24.90 25.20 25.50 25.80 26.10 26.40 26.70 27.00 27.30 27.60 27.90 28.20 28.50 28.80 29.10 29.40 29.70 30.00 30.30 30.60 30.90 31.20 31.50 31.80 32.10 32.40 32.70 33.00 33.30 33.60 33.90 34.20 34.50 34.80 35.10 35.40 35.70 36.00 36.30 36.60 36.90 37.20 37.50 37.80 38.10 38.40 38.70 39.00 39.30 39.60 39.90 40.20 40.50 40.80 41.10 41.40 41.70 42.00 42.30 42.60 42.90 43.20 43.50 43.80 44.10 44.40 44.70 45.00 45.30 45.60 45.90 46.20 46.50 46.80 47.10 47.40 47.70 48.00 48.30 48.60 48.90 49.20 49.50 49.80 50.10 50.40 50.70 51.00 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530.10 530.40 530.70 531.00 531.30 531.60 531.90 532.20 532.50 532.80 533.10 533.40 533.70 534.00 534.30 534.60 534.90 535.20 535.50 535.80 536.10 536.40 536.70 537.00 537.30 537.60 53



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLP0-J	RV/L	REFERENCE INFORMATION
(AP045)	MA-7.1PVT 1031.ROCKVELL PRR ORB. CONF.	.000	37.000	1.000	SREF .7245 SC.FT.
(AP047)	MA-7.1PVT 1031.ROCKVELL PRR ORB. CONF.	.000	103.000	3.000	LREF 7.8828 INCHES
(AP048)	MA-7.1PVT 1031.ROCKVELL PRR ORB. CONF.	.000	178.000	5.000	BREF 15.1152 INCHES
					XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



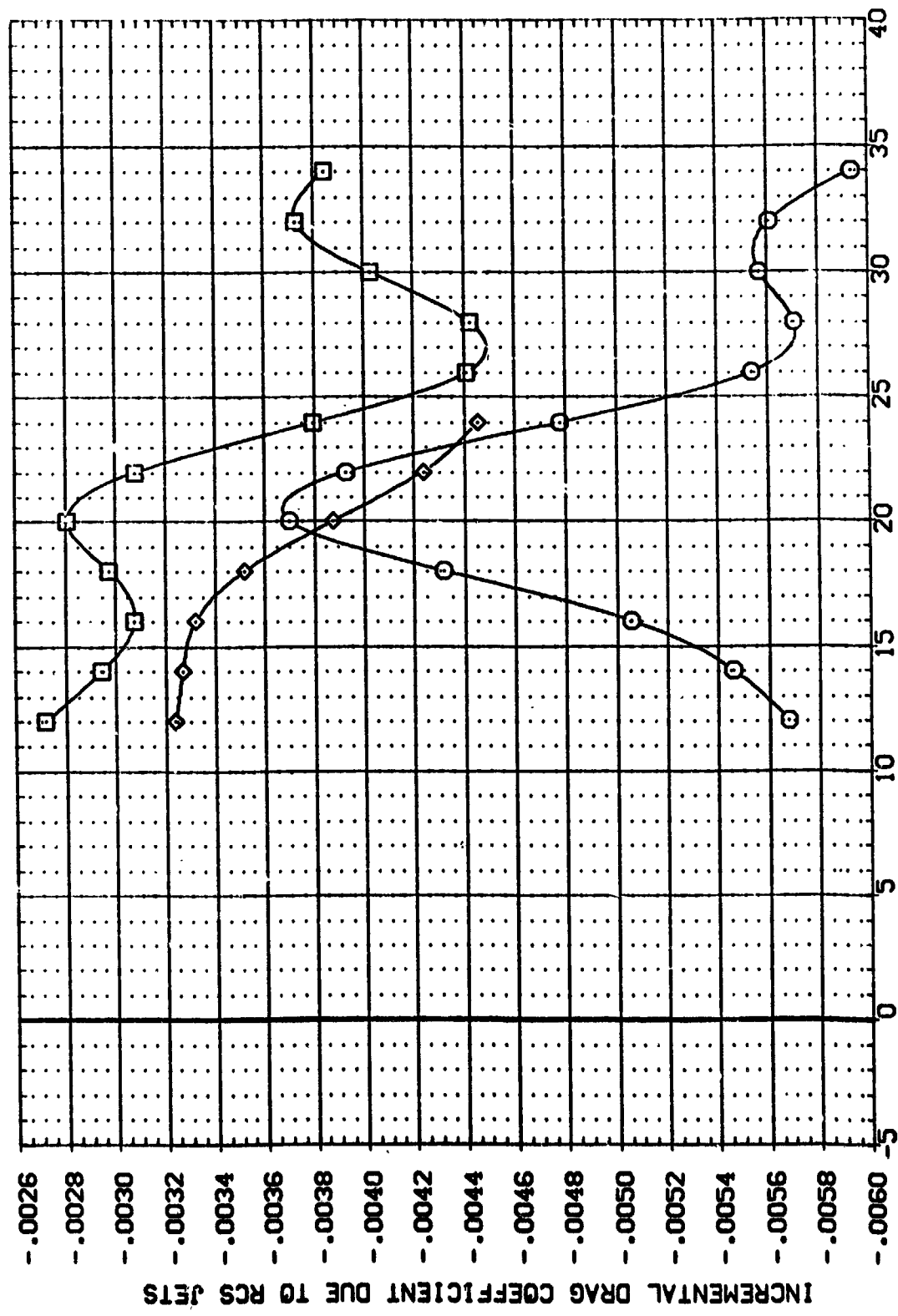
ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=4.5)

(AJMACH = 4.00)

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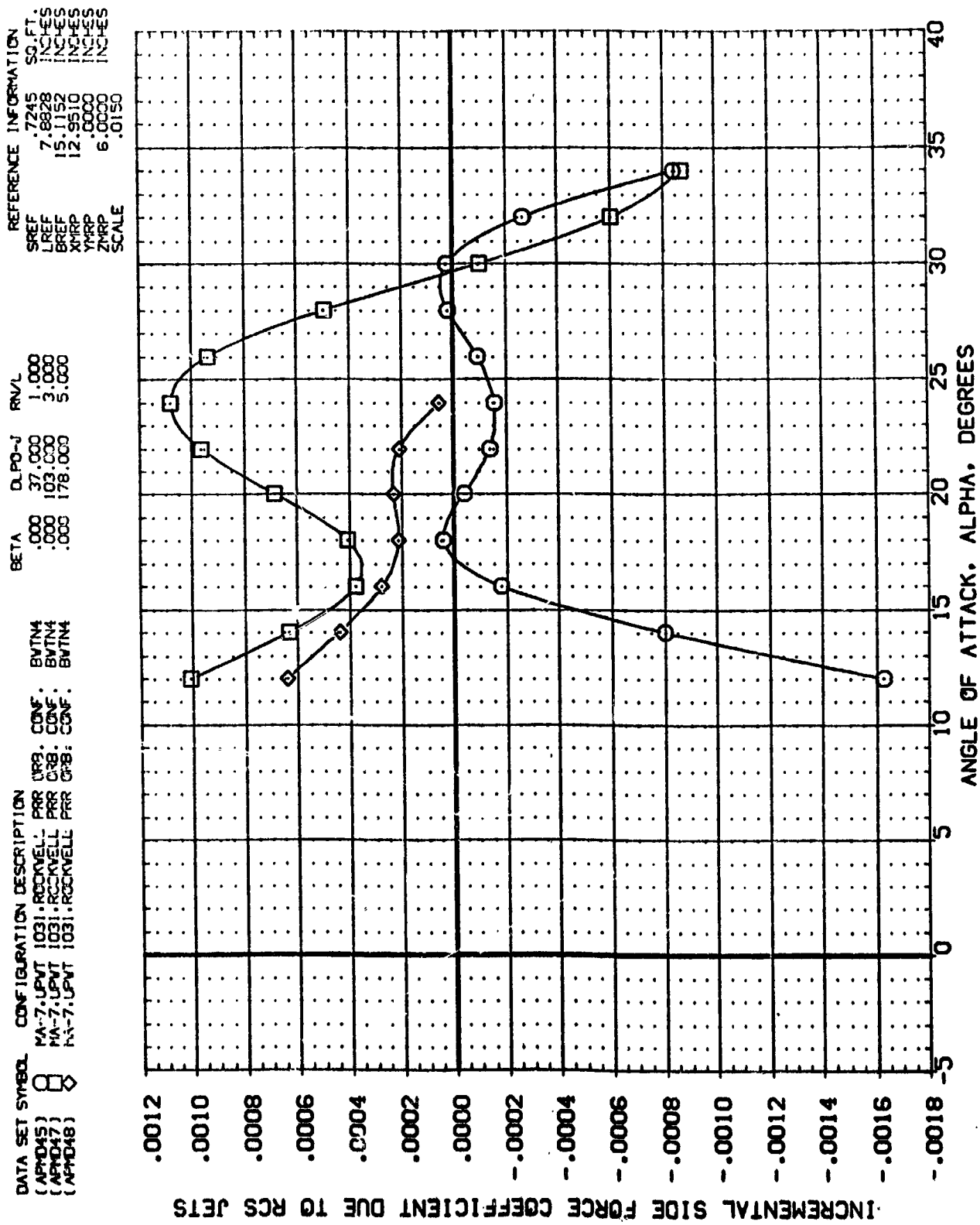
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(APD45)	MA-7, UPVT 1031, ROCKVELL PRR CRB, CONF.	.000	27.000	1.000	SREF 7245 SQ. FT.
(APD47)	MA-7, UPVT 1031, ROCKVELL PRR CRB, CONF.	.000	103.000	3.000	LEFF 7.6828 INCHES
(APD48)	MA-7, UPVT 1031, ROCKVELL PRR CRB, CONF.	.000	178.000	5.000	BREF 15.1152 INCHES
					XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=4.5)

(A)MACH = 4.00

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**{A}MACH = 4.00**

REFERENCE INFORMATION

SREF	.7245	SQ.FT.
LREF	7.8828	INCHES
BREF	15.1152	INCHES
XMRP	12.9510	INCHES
YMRP	.0000	INCHES
ZMRP	.0000	INCHES
SCALE	6.0150	

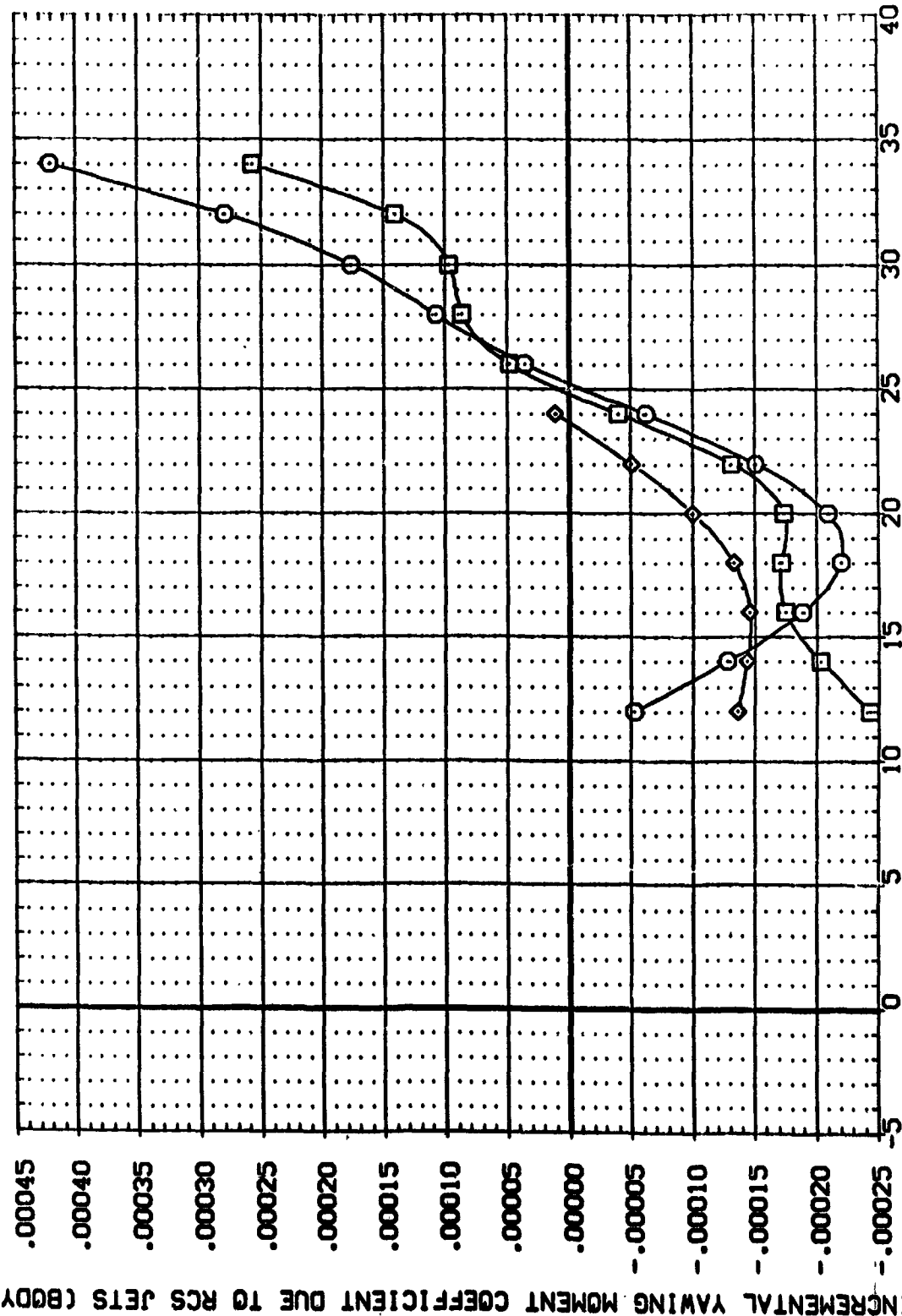
BETA

DLPO-J	RVL
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.000	3.000
.000	5.000

DATA SET SYMBOL

MA-7.UPT	1031.ROCKWELL	PRR	ORR	CONF.	BVTN4
MA-7.UPT	1031.ROCKWELL	PRR	ORR	CONF.	BVTN4

CONFIGURATION DESCRIPTION



ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=4.5)




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 BREF 15.1152 INCHES  
 XGRP 12.9510 INCHES  
 YGRP 6.0000 INCHES  
 ZGRP 6.0000 INCHES  
 SCALE .0150

BETA .000 DLPO-J RV/L  
 .000 37.000 1.000  
 .000 103.000 3.000  
 .000 178.000 5.000

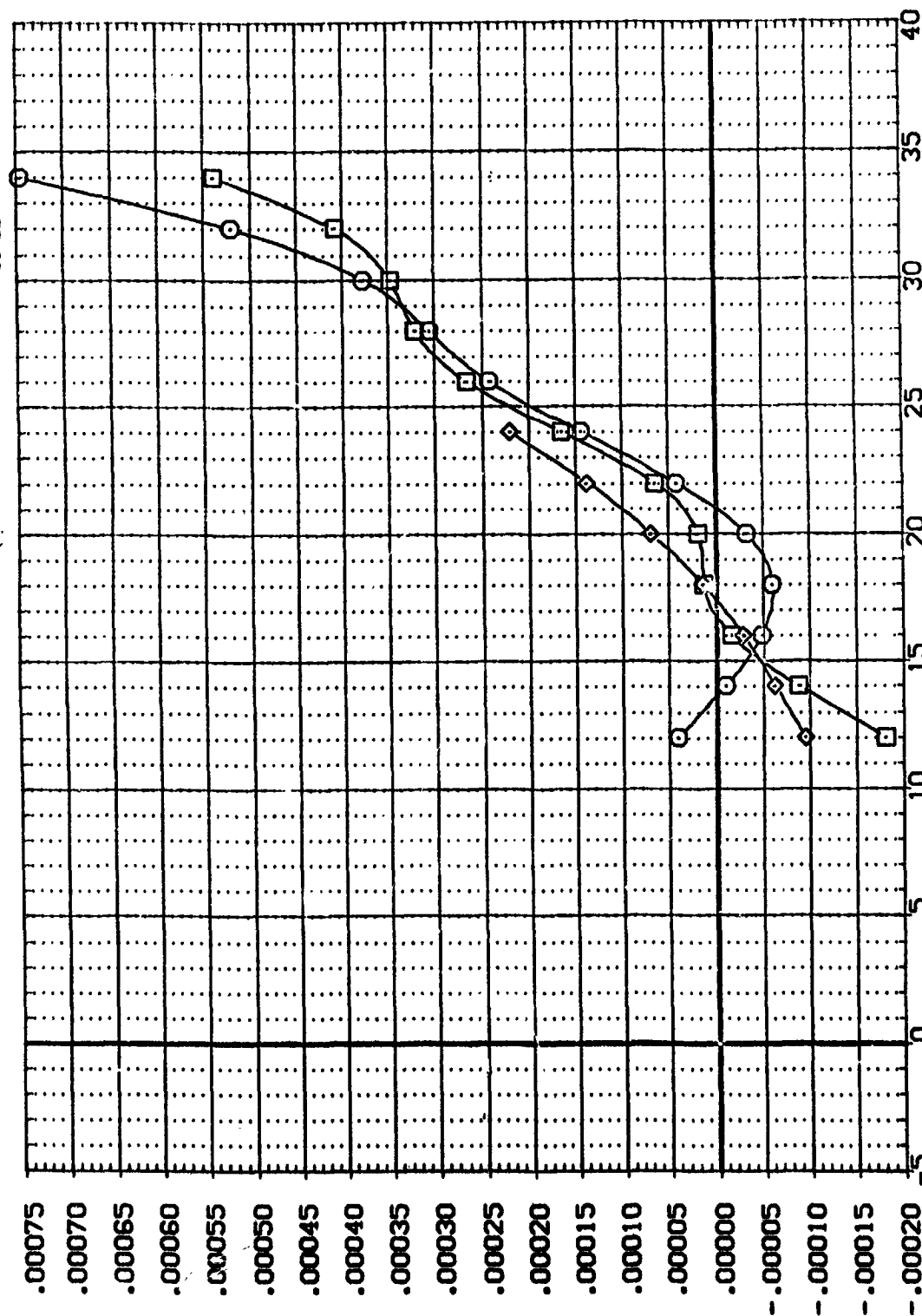
BVTNA  
 BVTNA  
 BVTNA

CRB: CONF.  
 CRB: CONF.  
 CRB: CONF.

CONFIGURATION DESCRIPTION  
 MA-7, UPVT 1031, RCRVWELL PRR CRB: CONF.  
 MA-7, UPVT 1031, RCRVWELL PRR CRB: CONF.  
 MA-7, UPVT 1031, RCRVWELL PRR CRB: CONF.

DATA SET SYMBOL  
 (AP045)   
 (AP047)   
 (AP048) 

INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (STABILITY AXIS)



ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=4.5)

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(A)MACH = 4.00

REFERENCE INFORMATION

SREF	7.245	SCALE	10.000
LREF	7.8828	INCHES	10.000
BREF	15.1152	INCHES	10.000
XRMP	12.9510	INCHES	10.000
YMRP	0.0000	INCHES	10.000
ZMRP	6.0000	INCHES	10.000
SCALE	0.0150		

BETA

DLPO-J	RVL
.000	1.000
.000	3.000
.000	5.000

BVTN4

BVTN4
BVTN4
BVTN4

CONF.

ORB.	CONF.
ORB.	CONF.
ORB.	CONF.

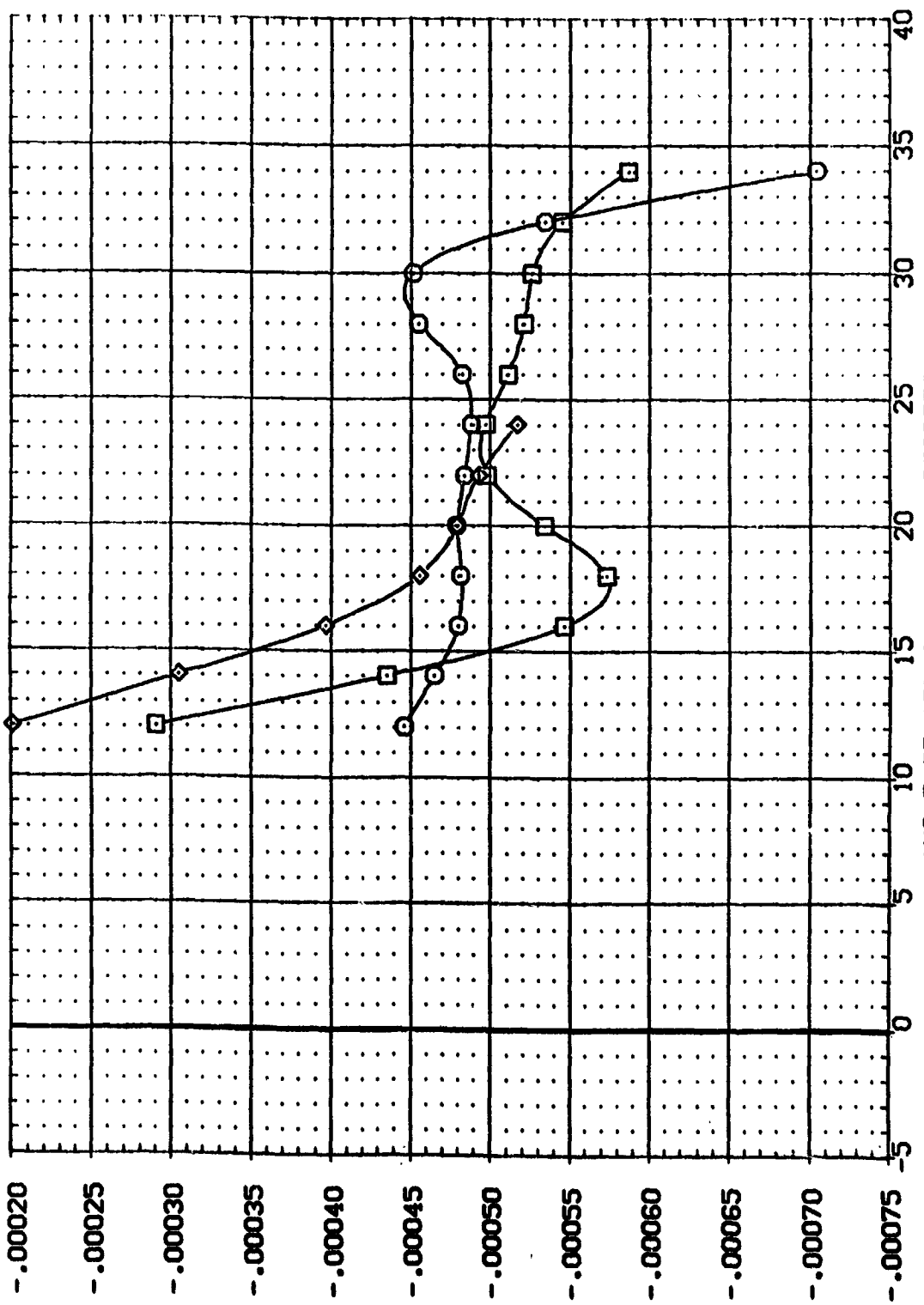
CONFIGURATION DESCRIPTION

MA-7.1PVT	1031.ROCKVELL	PRR	ORB.	CONF.
MA-7.1PVT	1031.ROCKVELL	PRR	ORB.	CONF.
MA-7.1PVT	1031.ROCKVELL	PRR	ORB.	CONF.

DATA SET SYMBOL

(APMD45)	□
(APMD47)	◇
(APMD48)	○

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS (BODY AXIS)



ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=4.5)

(A)MACH = 4.00



DATA SET SYMBOL  
(AP045)  
(AP047)  
(AP048)

CONFIGURATION DESCRIPTION  
MA-7.UPT 1031.ROCKWELL PRR ORB. CONF.  
MA-7.UPT 1031.ROCKWELL PRR ORB. CONF.  
MA-7.UPT 1031.ROCKWELL PRR ORB. CONF.

BETA  
.000  
.000  
.000

DLPO-J  
37.000  
103.000  
178.000

RV/L  
1.000  
3.000  
5.000

REFERENCE INFORMATION  
SREF 7245 SO.FT.  
LREF 7.8828 INCHES  
BREF 15.1152 INCHES  
XREF 12.9510 INCHES  
YREF .0000 INCHES  
ZREF 6.0000 INCHES  
SCALE .0150

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS  
STABILITY AXIS

ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=4.5)

(A)MACH = 4.00

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INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS

STABILITY AXIS

ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=4.5)

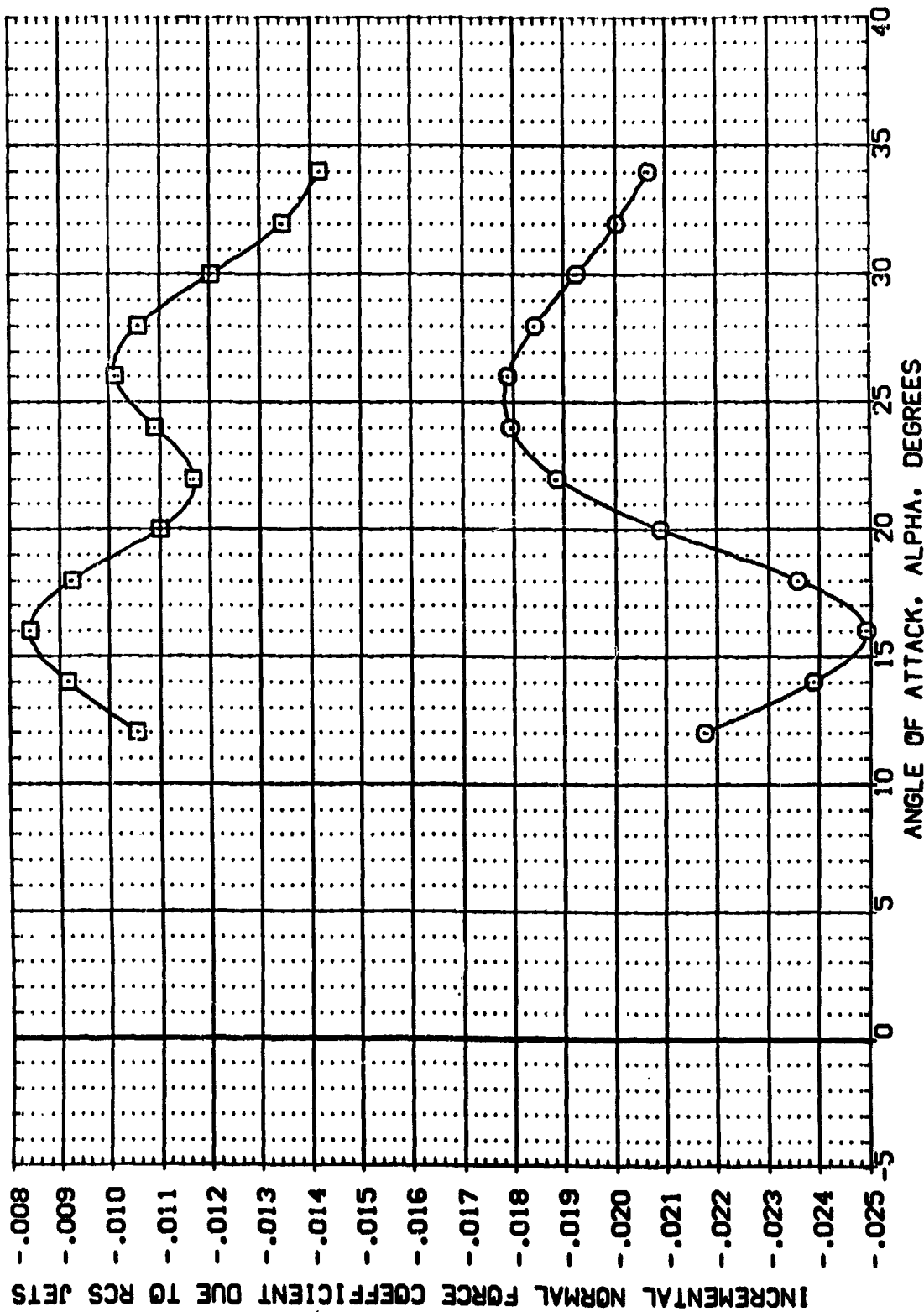
(A)MACH = 4.00

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DATA SET SYMBOL: (AP049) (AP053) CONFIGURATION DESCRIPTION: MA-7-UPVT 1031, ROCKWELL PRR CR8, CONF. MA-7-UPVT 1031, ROCKWELL PRR CR8, CONF. BVTM4 BVTM4

BETA: DLPO-J RVAL: .000 1.000 .000 3.000

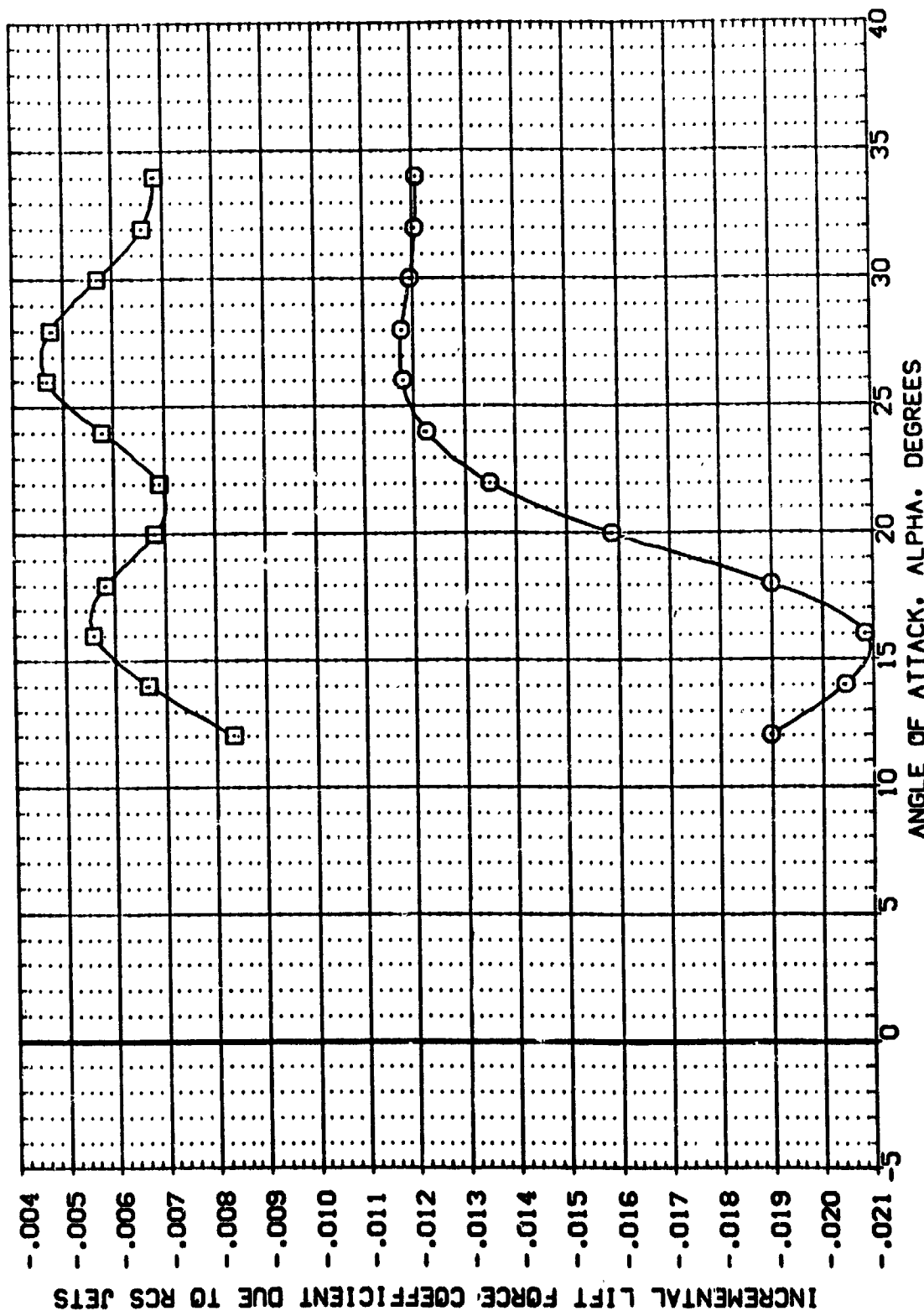
REFERENCE INFORMATION: SREF: 7245 50 FT. LREF: 7.6828 INCHES BREF: 15.1152 INCHES XMRP: 12.9510 INCHES YMRP: .0000 INCHES ZMRP: 6.0000 INCHES SCALE: .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=25)

(A)MACH = 4.00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA		DLPO-J		RVAL		REFERENCE INFORMATION	
(AP049)	□	HA-7,UPVT	1031,ROCKWELL	PRR	0.000	199.000	1.000	SREF	7245	50. FT	
(AP053)	□	HA-7,UPVT	1031,ROCKWELL	PRR	0.000	559.000	3.000	LREF	7.8838	INCHES	
				CONF.	GVTM			BREF	15.1132	INCHES	
				CONF.	BVTM			XPRP	12.9510	INCHES	
								YPRP	0.0000	INCHES	
								ZPRP	6.0000	INCHES	
								SCALE	0.0150		



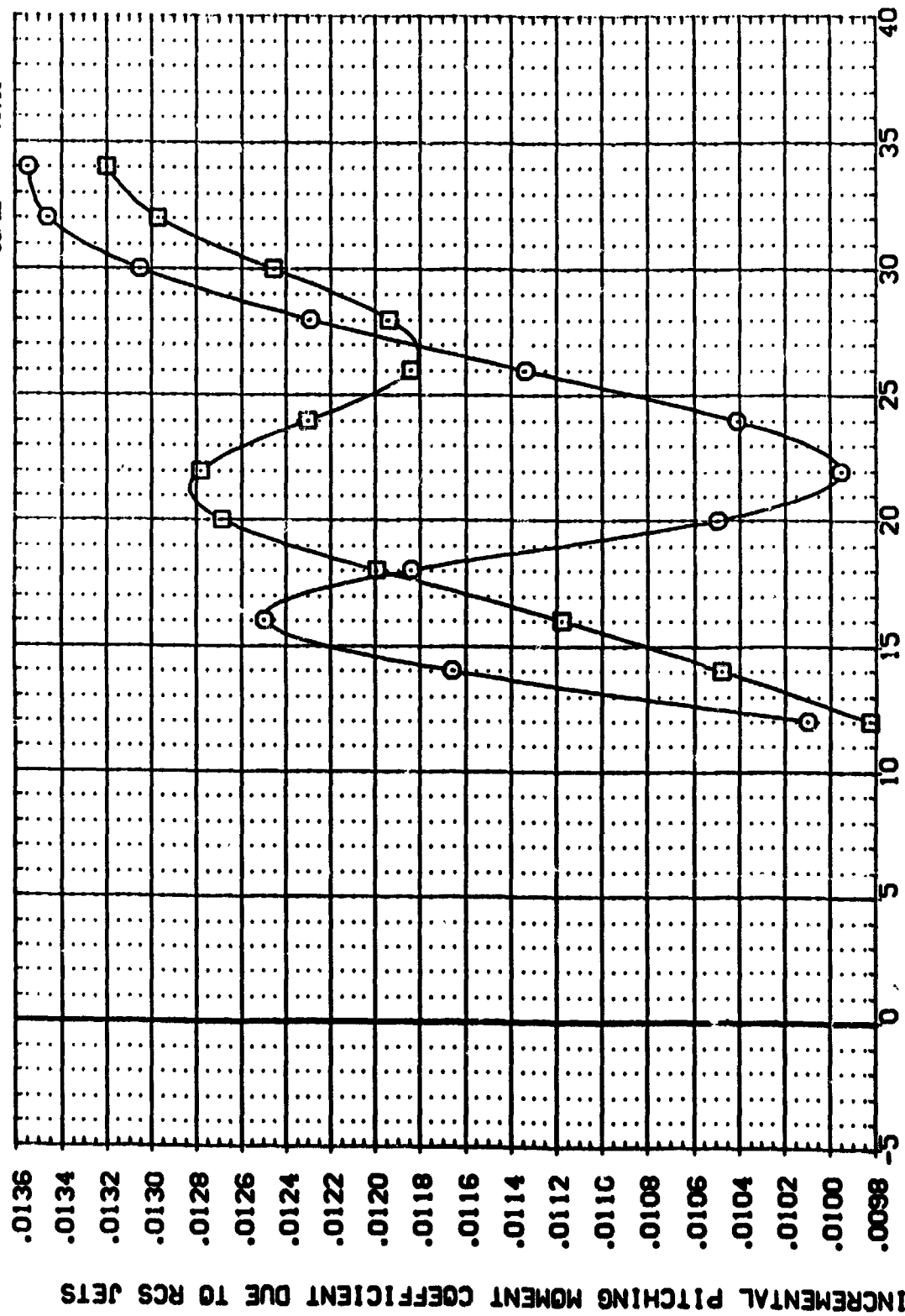
ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=25)

(A)MACH = 4.00

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DATA SET SYMBOL: (APR049) □  
CONFIGURATION DESCRIPTION: MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTM4  
MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF. BVTM4  
BETA: .000 199.000  
DLPO-J: .000 559.000  
RV/L: 1.000 3.000  
REFERENCE INFORMATION:  
SREF: .7245 SC.FT.  
LREF: 7.8828 INCHES  
EREF: 15.1152 INCHES  
XMRP: 12.9510 INCHES  
YMRP: .0000 INCHES  
ZMRP: .0000 INCHES  
SCALE: .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=25)  
(A)MACH = 4.00  
PAGE 193

DATA SET SYMBOL: MA-7-UPVT (AP04S) (AP05S)

CONFIGURATION DESCRIPTION: MA-7-UPVT 1031.ROOVELL PRR CRG. CONF. MA-7-UPVT 1031.ROOVELL PRR CRG. CONF.

BTM4 BTM4

BETA: .000 .000

DLPO-J: 199.000 559.000

RM/L: 1.000 3.000

REFERENCE INFORMATION:

SREF: 7245 50.FT.

LREF: 7.8828 INCHES

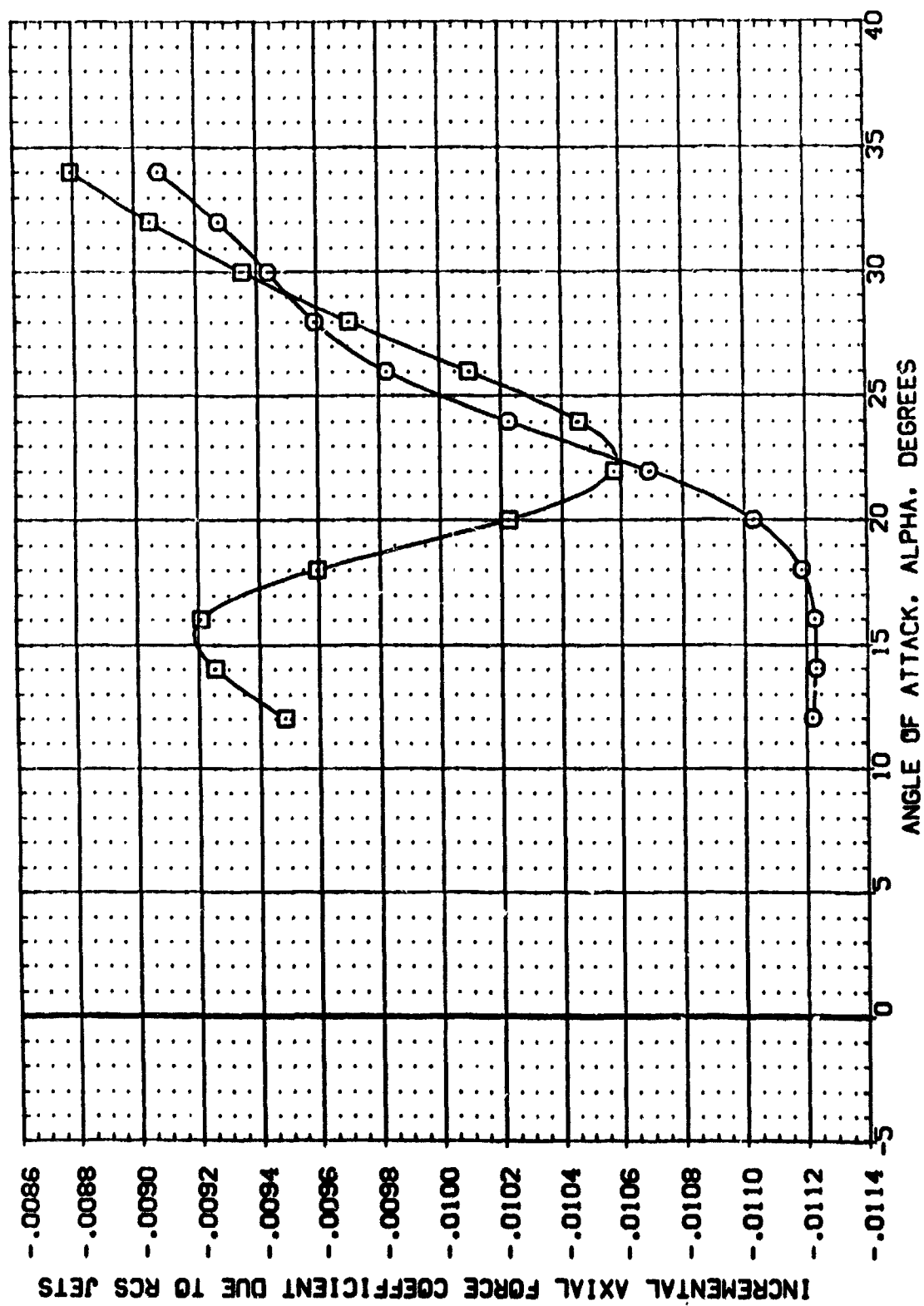
BREF: 15.1152 INCHES

APRP: 12.9510 INCHES

VZPP: .0000 INCHES

ZPP: 6.0000 INCHES

SCALE: .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=25)

(AJMACH = 4.00)

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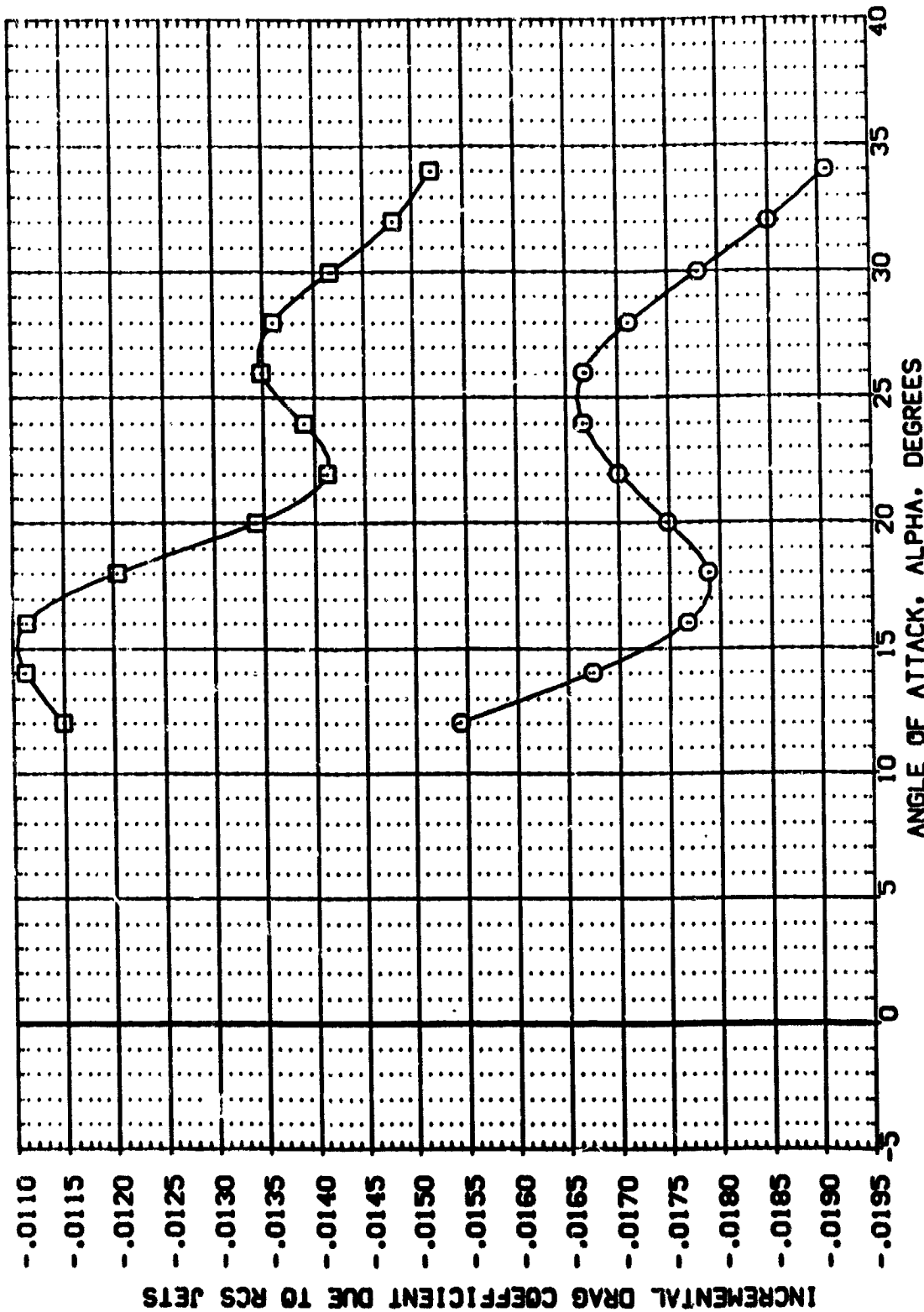
DATA SET SYMBOL: (APR049)  
(APR053)

CONFIGURATION DESCRIPTION  
MA-7-UPVT 1031-ROCKWELL PRR ORB.  
MA-7-UPVT 1031-ROCKWELL PRR ORB.

BVTH4  
BVTH4

BETA: .000  
DLPO-J: 199.000  
RV/L: 1.000  
3.000

REFERENCE INFORMATION  
SREF: 7245 50 FT.  
LREF: 7.6828 INCHES  
BREF: 15.1152 INCHES  
XREF: 12.5510 INCHES  
YREF: .0000 INCHES  
ZREF: 6.0000 INCHES  
SCALE: 6:50



ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=25)

(A)MACH = 4.00

DATA SET SYMBOL: **CONF** (APPROX) **MA-7-UPVT** **1031** **ROCKWELL** **PRR** **CRB** **CONF** **BTM** **BTM**

BETA: **DLPO-J** **RM/L** **RM/L**

REFERENCE INFORMATION: **SREF** **72415** **50** **FT** **INCHES**

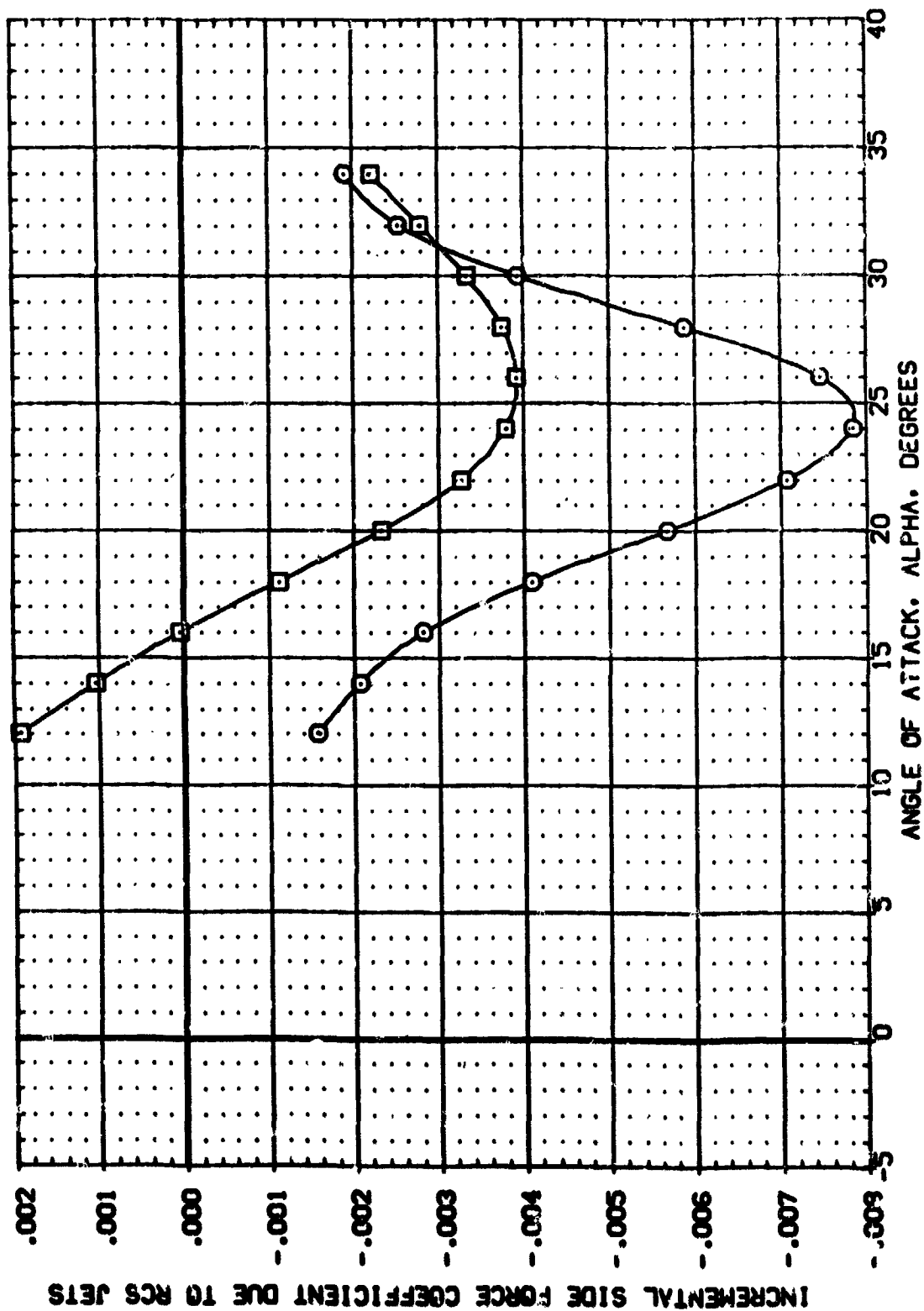
**LREF** **7.8828** **INCHES**

**BREF** **15.1152** **INCHES**

**YPRP** **12.9510** **INCHES**

**ZPRP** **6.0000** **INCHES**

**SCALE** **.0150**



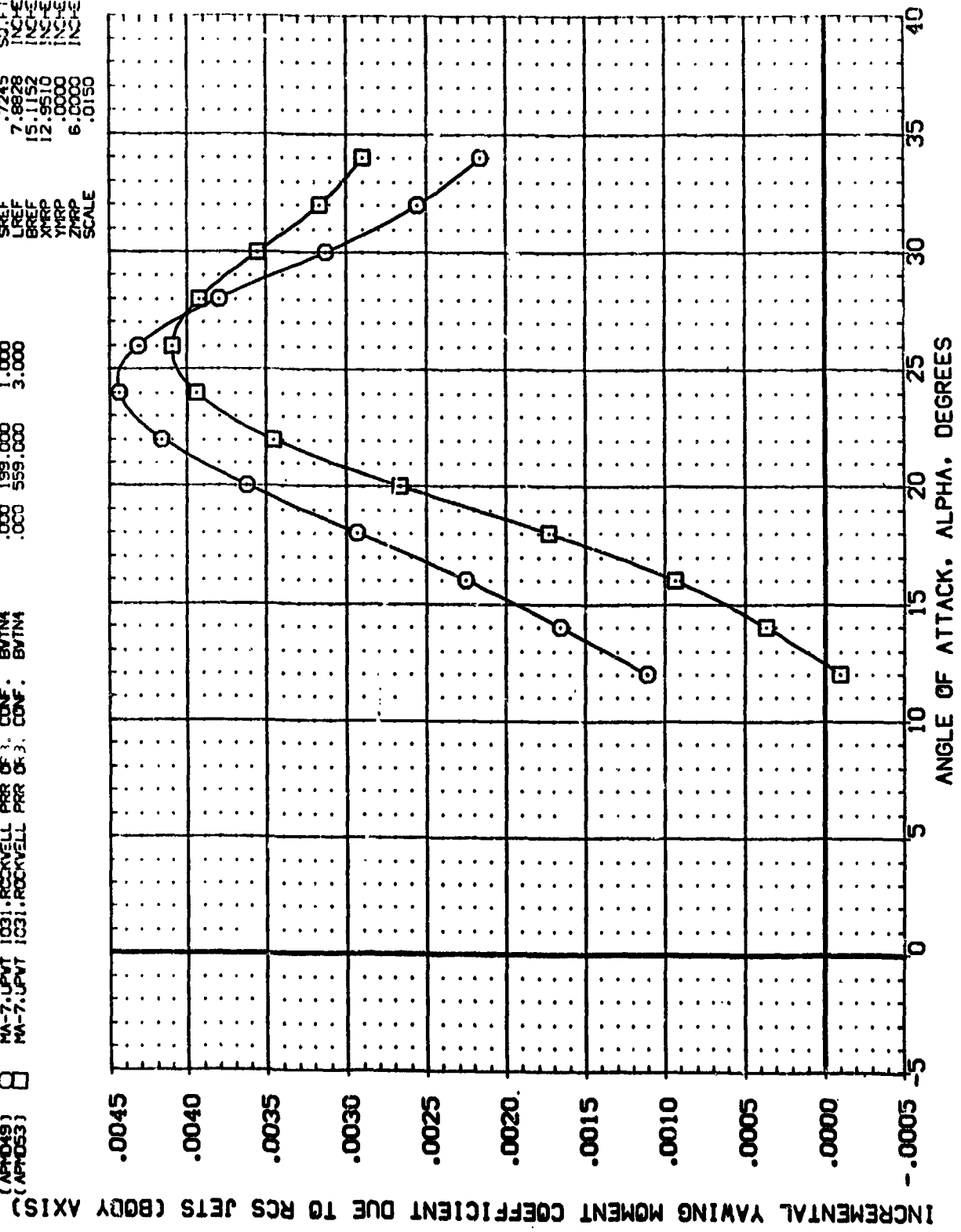
ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=25)

(A)MACH = 4.00

DATA SET SYMBOL (AP049) (AP053) MA-7.UPT 1031.ROCKWELL PRR OF 3. CONF. BVTM4 MA-7.UPT 1031.ROCKWELL PRR OF 3. CONF. BVTM4

BETA DLP0-J R/V/L .000 199.000 1.000 .000 559.000 3.000

REFERENCE INFORMATION SREF .7245 SQ.FT. LREF 7.8828 INCHES BREF 15.1152 INCHES XMRP 12.9510 INCHES YMRP .0000 INCHES ZMRP 6.0000 INCHES SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=25)

-(A)MACH = 4.00

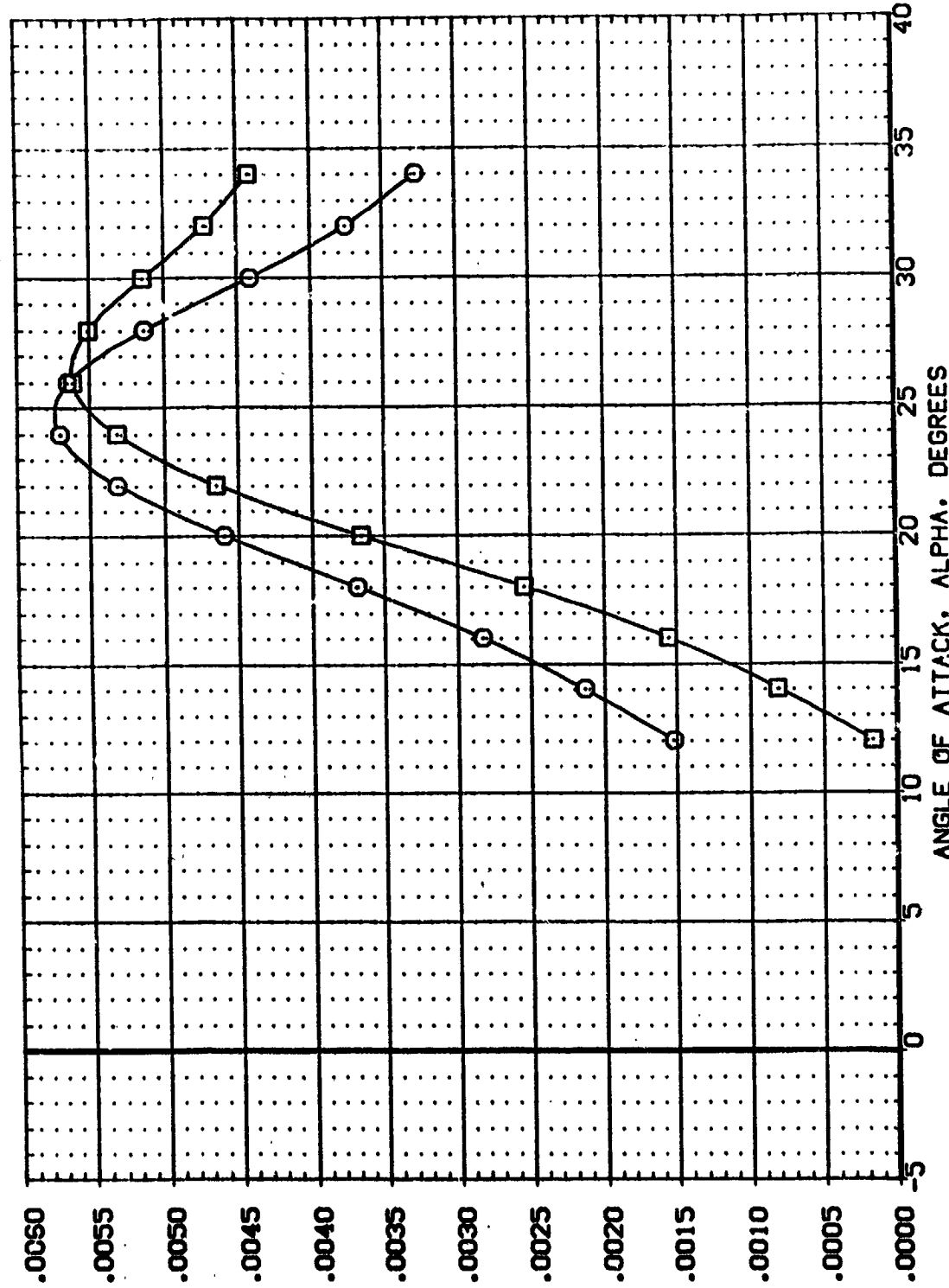


INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (STABILITY AXIS)

DATA SET SYMBOL: (AP049) MA-7-UPVT 1031.0' WELL PRR ORB. CONF. BVTNA  
 (AP053) MA-7-UPVT 1031.0' CRVLL PRR ORB. CON. BVTNA

BETA: DLPO-J RNVL  
 .000 199.000 1.000  
 .000 599.000 3.000

REFERENCE INFORMATION  
 SREF 7245 SO.FT.  
 LREF 7.8628 INCHES  
 BREF 15.1152 INCHES  
 XMRP 12.9510 INCHES  
 YMRP .0000 INCHES  
 ZMRP 6.0000 INCHES  
 SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=25)

(A)MACH = 4.00



DATA SET SYMBOL  
(APMD45)  
(APMD53)

CONFIGURATION DESCRIPTION  
MA-7-LPVT 1031-ROCKWELL PRR ORB. CONF.  
MA-7-LPVT 1031-ROCKWELL PRR ORB. CONF.

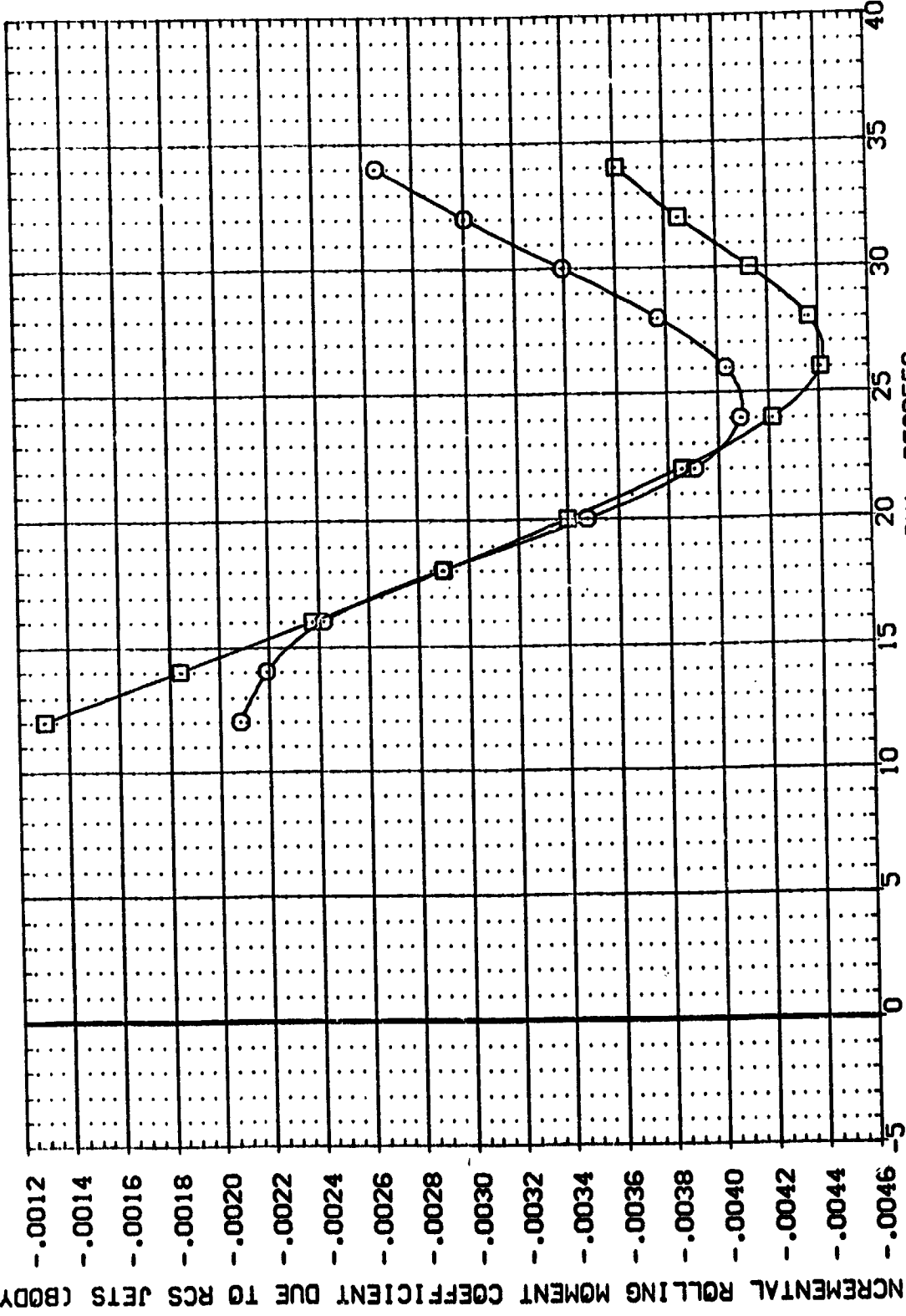
BVTM4  
BVTM4

BETA  
.000  
.000

DLPO-J  
199.000  
559.000

RNVL  
1.000  
3.000

REFERENCE INFORMATION  
SREF .7245 50 FT.  
LREF 7.8828 INCHES  
BREF 15.1152 INCHES  
XREF 12.9510 INCHES  
YREF 6.0000 INCHES  
ZREF 6.0000 INCHES  
SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER(PJ/PINF=25)

(A)MACH = 4.00

DATA SET SYMBOL  
 (AP049)  
 (AP053)

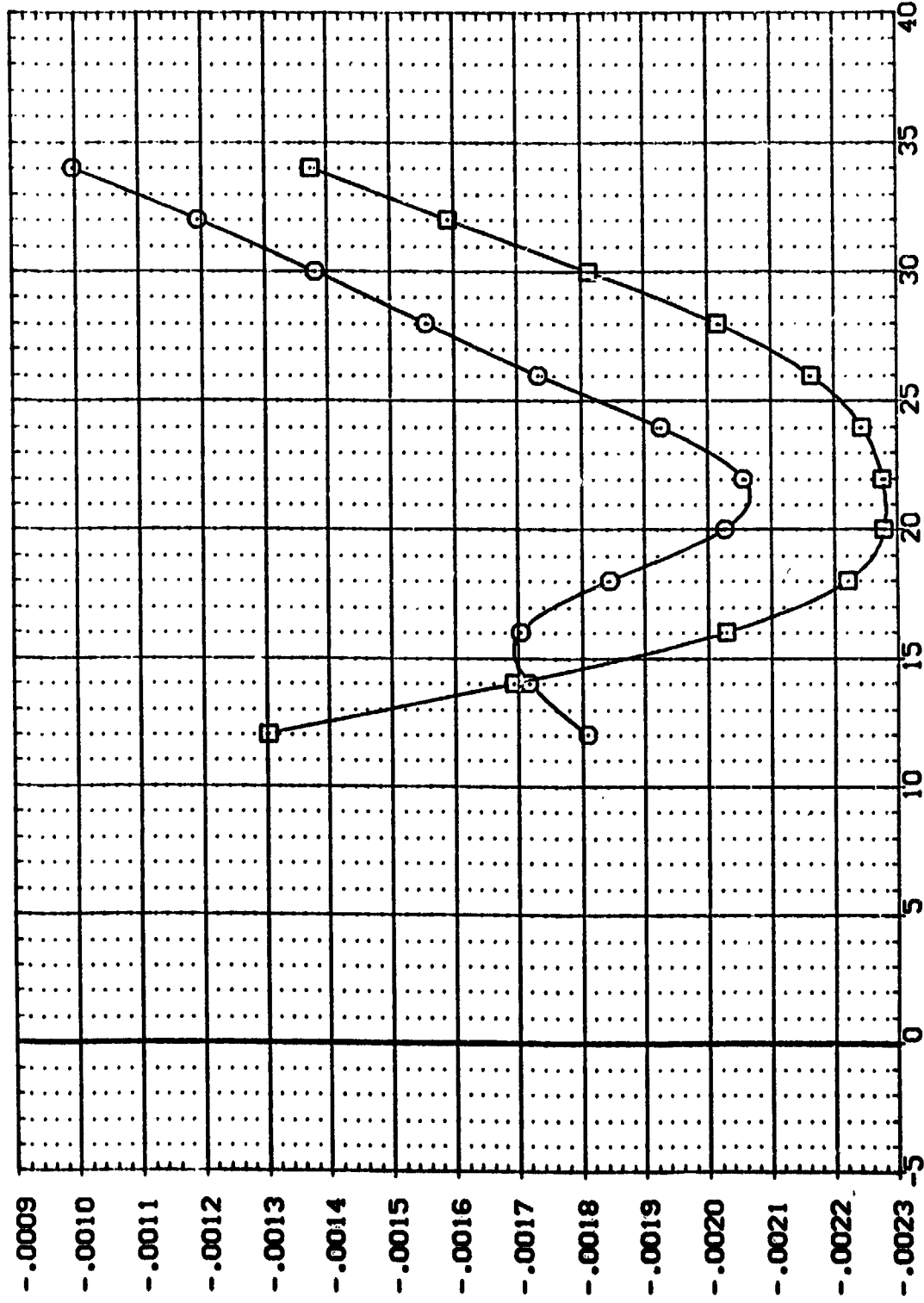
CONFIGURATION DESCRIPTION  
 MA-7.0PVT 1031.ROCKWELL PRR 098. CONFIG. SVT14  
 MA-7.0PVT 1031.ROCKWELL PRR 093. CONFIG. SVT14

BETA  
 .000 199.000 1.000  
 .000 559.000 3.000

DLPO-J RNL

REFERENCE INFORMATION  
 SREF .7245 50. FT.  
 LREF 7.6938 INCHES  
 BREF 15.1152 INCHES  
 XMRP 12.6610 INCHES  
 YMRP .0000 INCHES  
 ZMRP 6.0000 INCHES  
 SCALE .0150

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS STABILITY AXIS



ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE (INCREMENTAL DATA) EFFECT OF REYNOLDS NUMBER (PJ/PINF=25)

(A)MACH = 4.00

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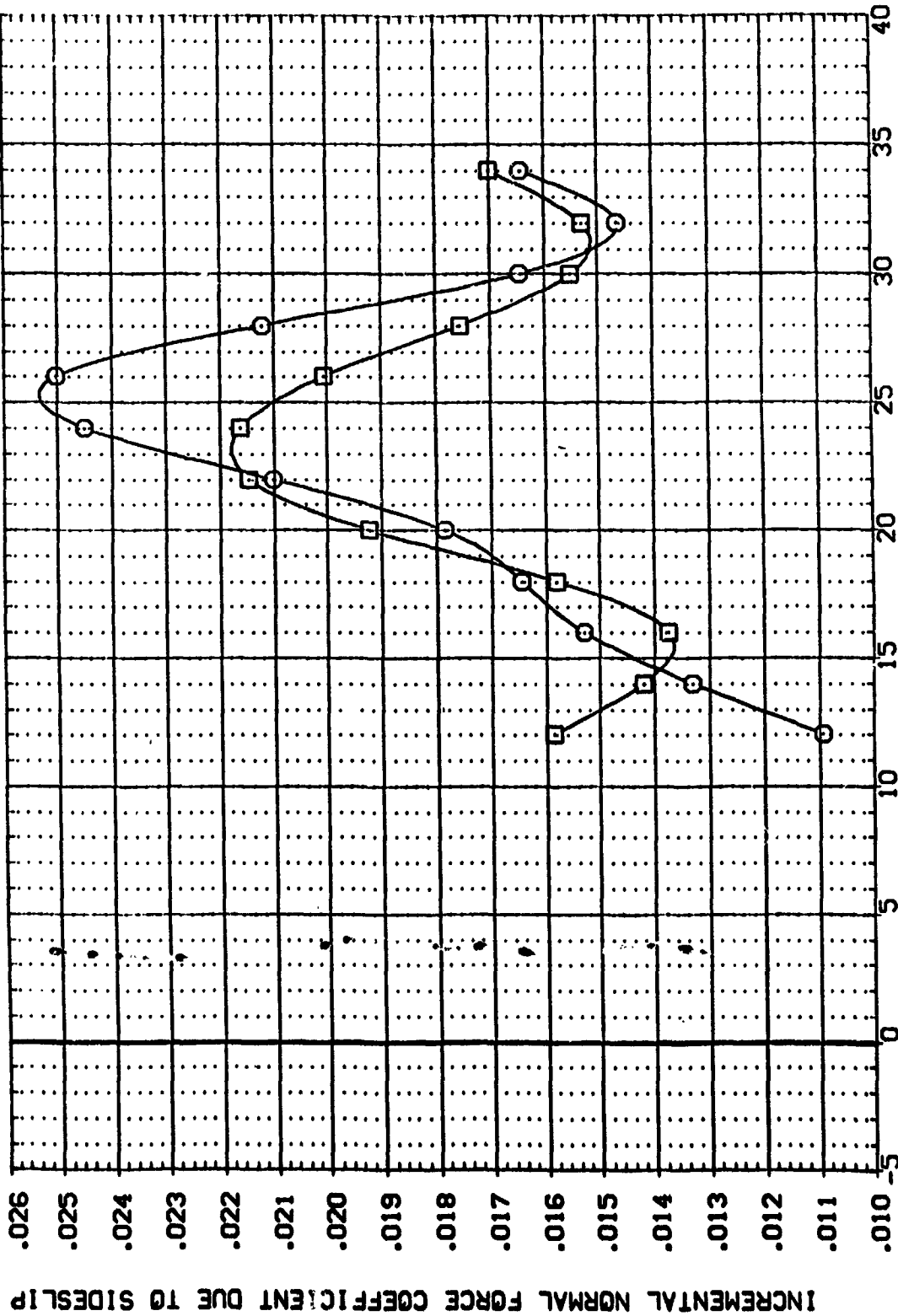


DATA SET SYMBOL: (APD41) (APD42)

CONFIGURATION DESCRIPTION: MA-7.LPVT 1031.RCKVELL PRR CRB. CONF. BWTN4 MA-7.LPVT 1031.RCKVELL PRR CRB. CONF. BWTN4

DLTBT A PO-JET RNVL: -2.500 .000 1.000 -5.000 .000 1.000

REFERENCE INFORMATION: SREF 7.245 S2.F. 7.245 LREF 7.8528 S2.F. 7.8528 BREF 15.1152 S2.F. 15.1152 XMRP 12.9510 S2.F. 12.9510 YMRP .0000 S2.F. .0000 ZMRP 6.0000 S2.F. 6.0000 SCALE .0150 S2.F. .0150



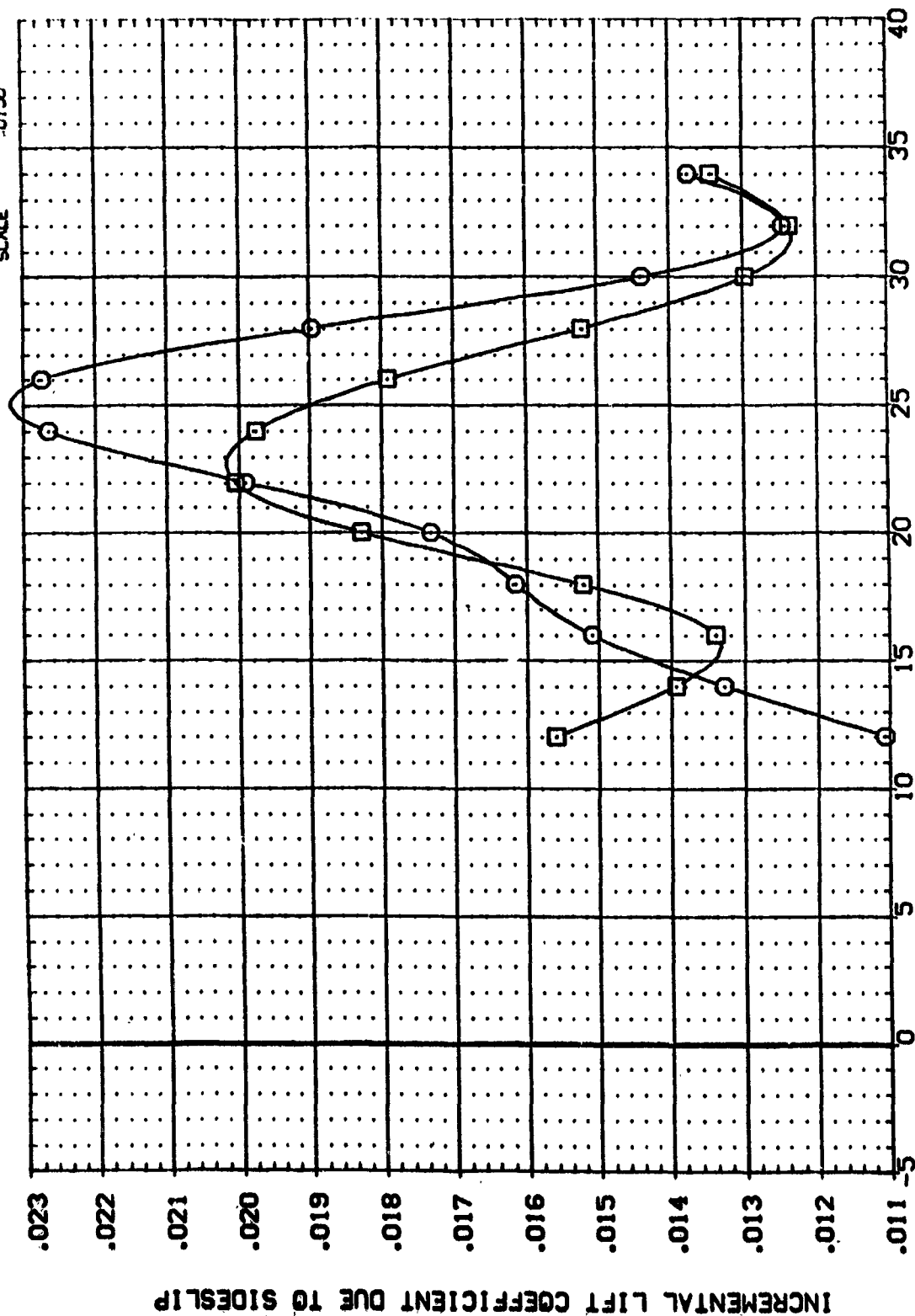
ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 4.00

DATA SET SYMBOL: ☐ (APR041) ☐ (APR042) CONFIGURATION DESCRIPTION: MA-7, UPVT 1031, ROCKWELL PRR 08B, CONF: BVTM4 MA-7, UPVT 1031, ROCKWELL PRR 08B, CONF: BVTM4

DLTBT A: -2.500 PO-JET: .000 RN/L: 1.000

REFERENCE INFORMATION: SREF: 7245 50 FT LREF: 7.6928 INCHES BREF: 15.1152 INCHES XMRP: 12.9510 INCHES YMRP: 6.0000 INCHES ZMRP: 6.0000 INCHES SCALE: .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

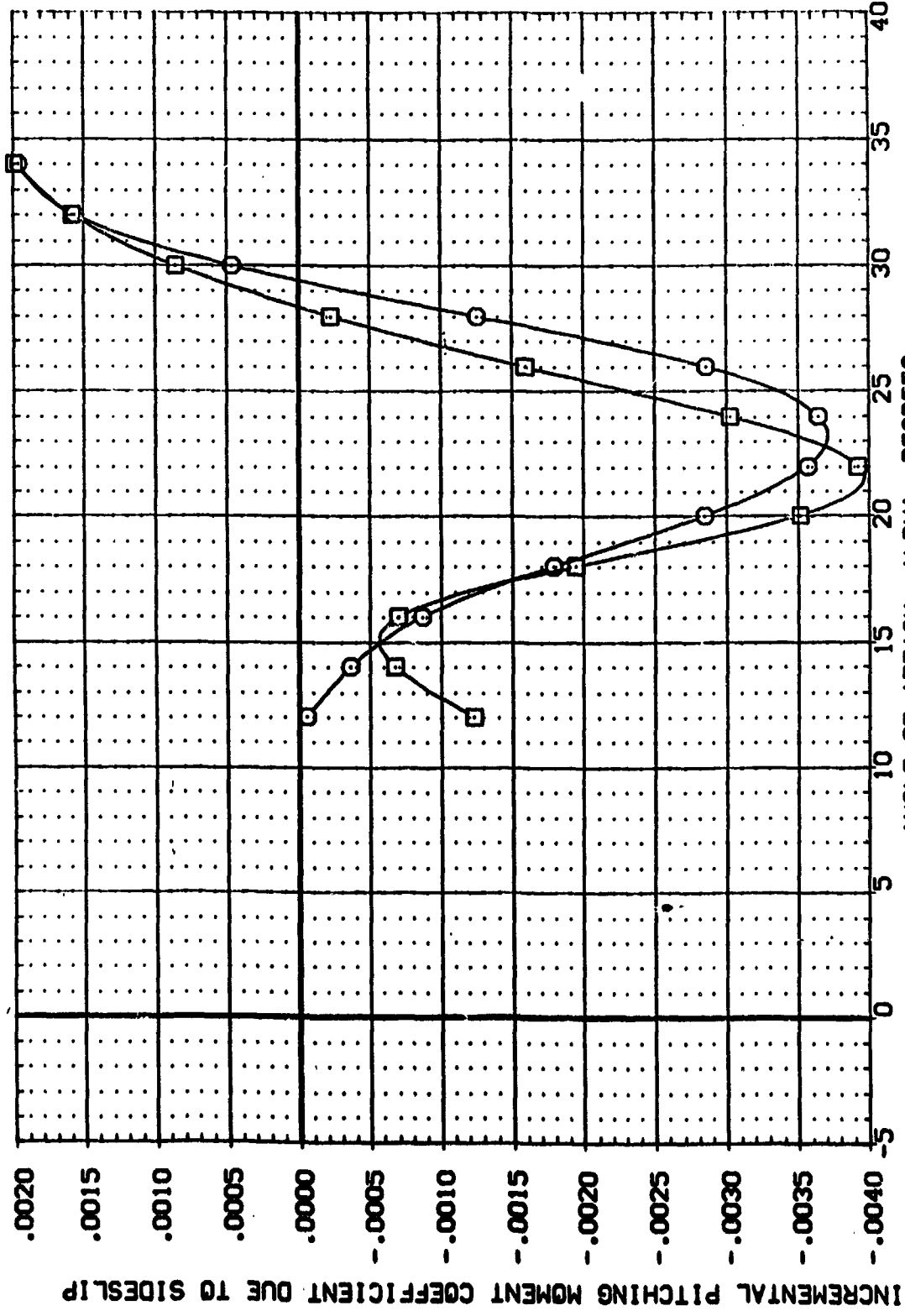
-(A)MACH = 4.00



DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
(AP041)    MA-7-UPVT 1031, ROCKWELL PRR ORB, CONF.    BUTN4  
(AP042)    MA-7-UPVT 1031, ROCKWELL PRR ORB, CONF.    BUTN4

DLTBYA    PG-JET    RV/L  
-2.500    .000    1.000  
-3.000    .000    1.000

REFERENCE INFORMATION  
SREF    7245    SQ.FT.  
LREF    7.8828    INCHES  
BREF    15.1152    INCHES  
XMRP    12.9510    INCHES  
YMRP    .0000    INCHES  
ZMRP    6.0000    INCHES  
SCALE    .0150



ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

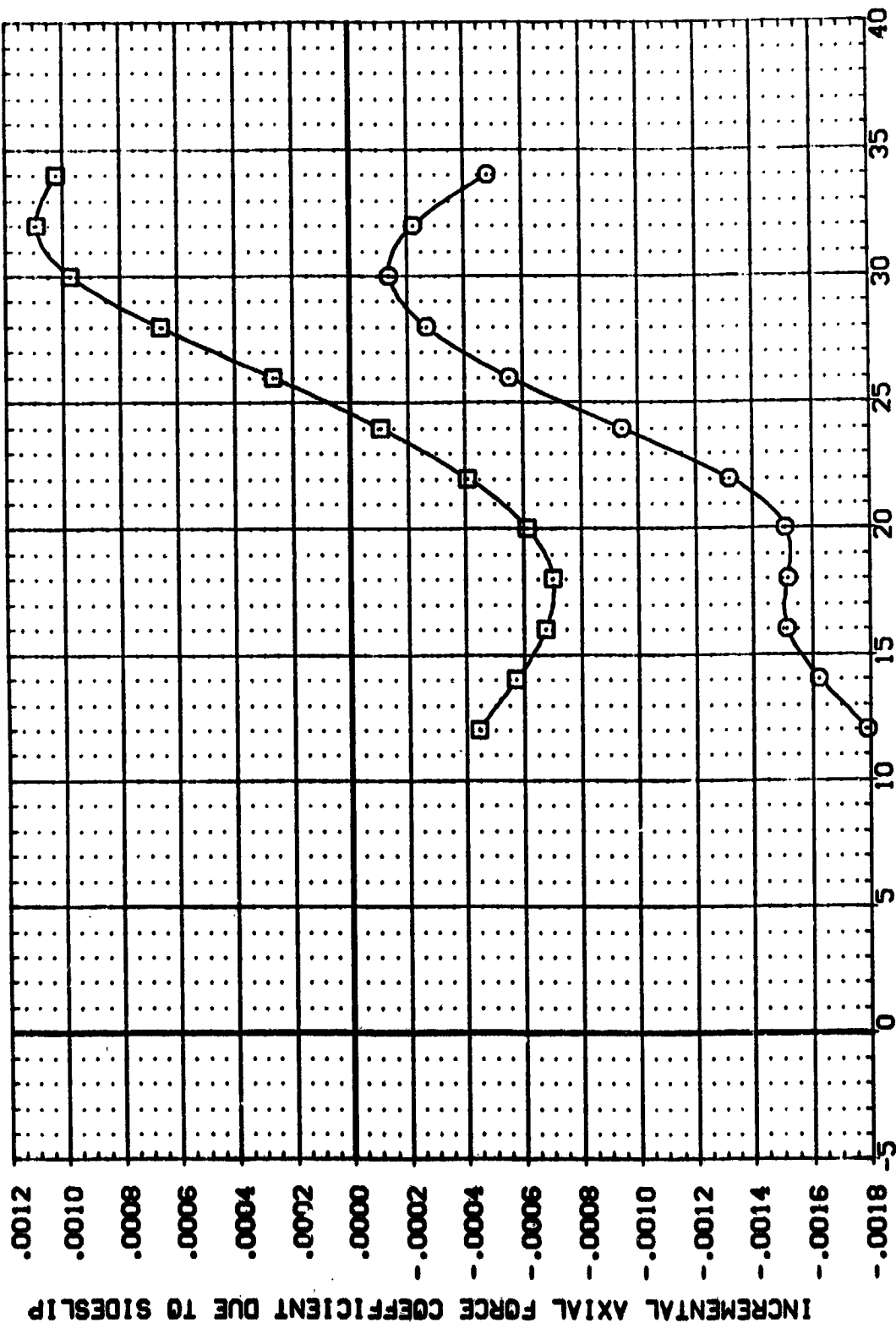
(A)MACH = 4.00

DATA SET SYMBOL: (APR041) (APR042) □

CONFIGURATION DESCRIPTION: MA-7,UPVT 1031,RODMELL PRR ORB. CONF: BVTN4  
MA-7,UPVT 1031,RODMELL PRR ORB. CONF: BVTN4

DLTBT A PO-JET RVL  
-2.500 .000 1.000  
-5.000 .000 1.000

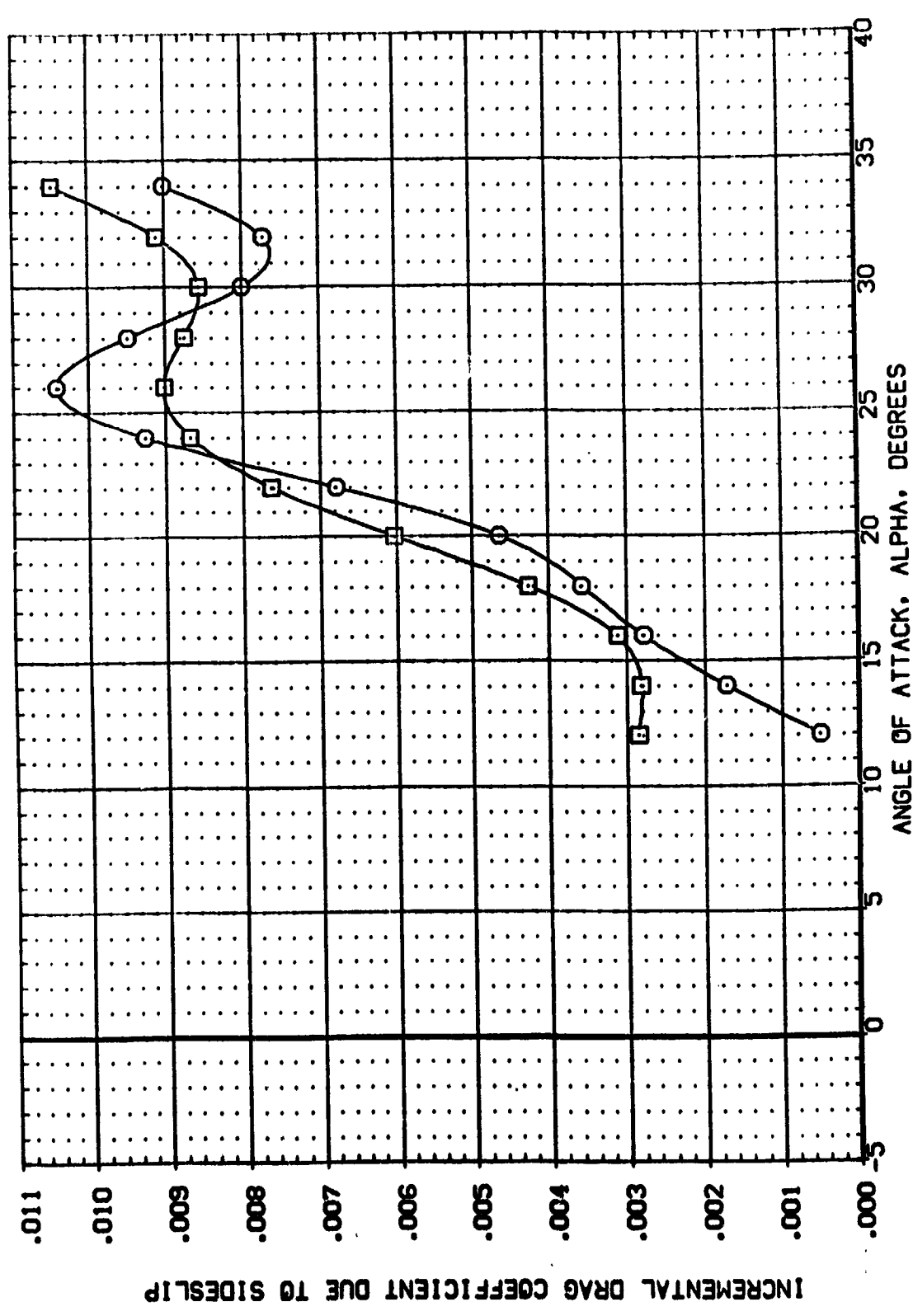
REFERENCE INFORMATION:  
SREF 7245 50 FT.  
LREF 7.6828 INCHES  
BREF 15.1152 INCHES  
XREF 12.9510 INCHES  
YREF .0000 INCHES  
ZREF 6.0000 INCHES  
SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DLTBTA	PO-JET	RN/L	REFERENCE INFORMATION
(AP041)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: BVTM	-2.500	.000	1.000	SREF .7245 SQ.FT.
(AP042)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: BVTM	-5.000	.000	1.000	LREF 7.8828 INCHES
					BREF 15.1152 INCHES
					XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

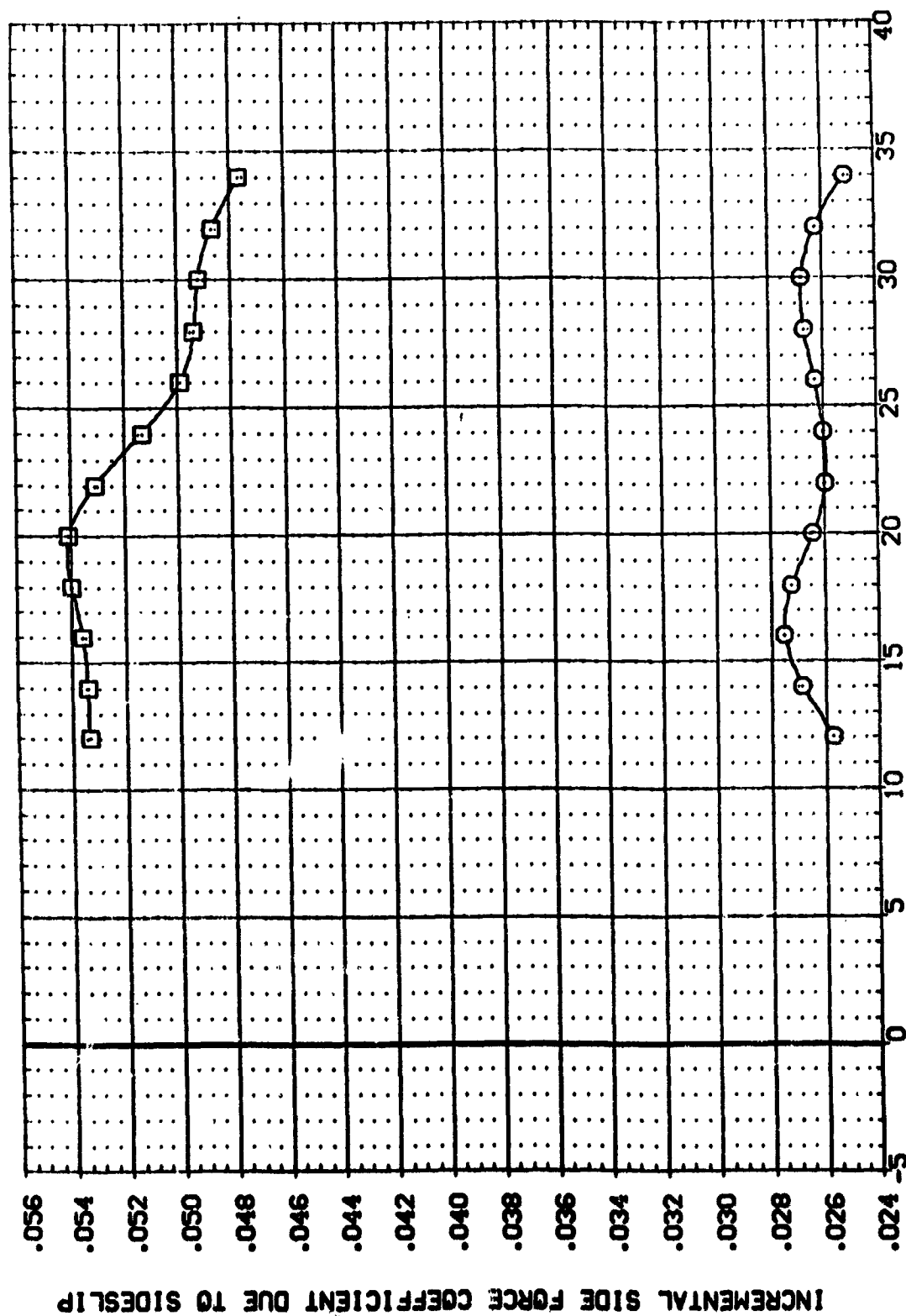
(M)MACH = 4.00



DATA SET SYMBOL: MA-7.1UPVT 1031. ROCKWELL PER DBB. CONF. BVTN4  
 (APPROX1) MA-7.1UPVT 1031. ROCKWELL PER DBB. CONF. BVTN4  
 (APPROX2)

DLTBT A PO-JET RNL  
 -2.500 .000 1.000  
 -5.000 .000 1.000

REFERENCE INFORMATION  
 SREF .7245 50. FT.  
 LREF 7.8928 INCHES  
 BREF 15.1152 INCHES  
 XMR2 12.9510 INCHES  
 YMR2 00.000 INCHES  
 ZMR2 6.0000 INCHES  
 SCALE .0150



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 4.00

REFERENCE INFORMATION

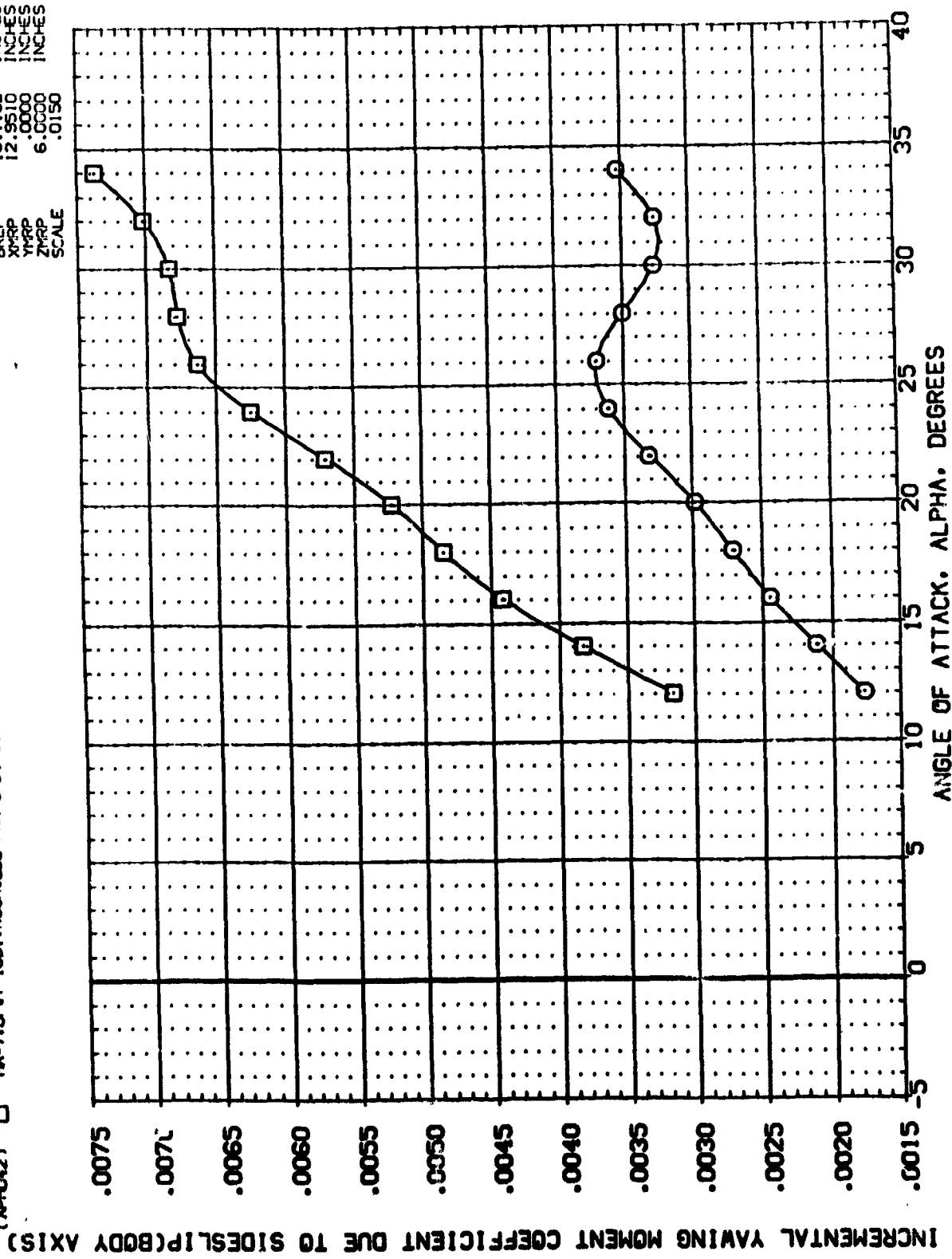
SREF	.7245	SQ.FT.
LREF	7.6828	INCHES
BREF	15.1152	INCHES
XPRP	12.9510	INCHES
YPRP	.0000	INCHES
ZPRP	6.0000	INCHES
SCALE	.0150	

DLTBA PO-JET RV/L

-2.500	.000	1.000
-5.000	.000	1.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AP041)	MA-7,UPVT 1031,ROCKWELL	PER DBB	CONF	BVTM4
(AP042)	MA-7,UPVT 1031,ROCKWELL	PER DBB	CONF	BVTM4



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

(A)MACH = 4.00

DATA SET SYMBOL: (AP0411)  
 (AP0412)

CONFIGURATION DESCRIPTION: MA-7, UPVT 1031, ROCKWELL PRR DB8, CONF: BVTM4  
 MA-7, UPVT 1031, ROCKWELL PRR DB8, CONF: BVTM4

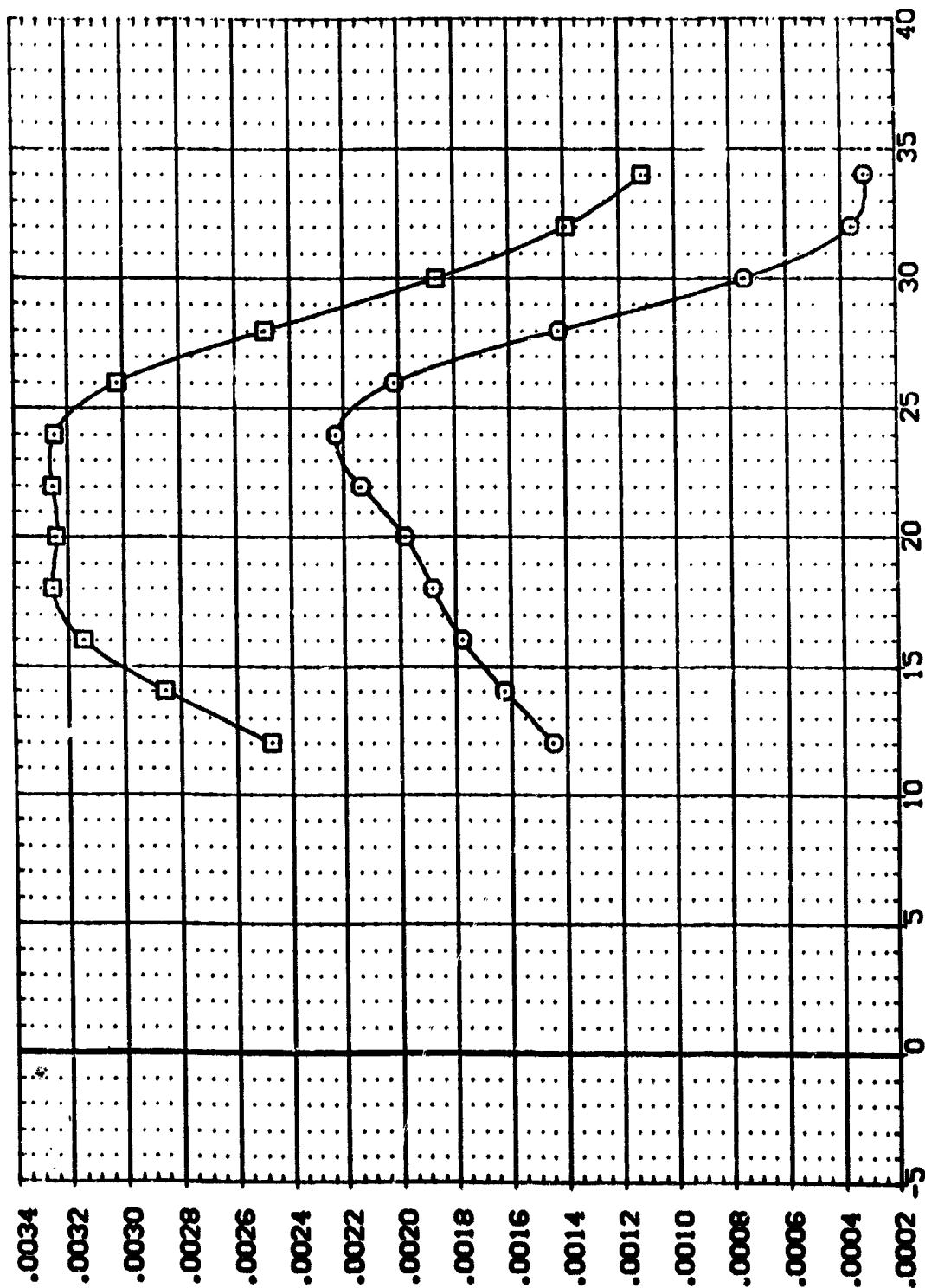
DLTBT A: -2.500  
 -5.000

PO-JET: .000  
 .000

RN/L: 1.000  
 1.000

REFERENCE INFORMATION:  
 SREF: 7245 SQ. FT.  
 LREF: 7.8828 INCHES  
 BREF: 15.1152 INCHES  
 XREF: 12.6516 INCHES  
 YREF: 6.0000 INCHES  
 ZREF: 6.0000 INCHES  
 SCALE: .0150

INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO SIDESLIP (STAB AXIS)



ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

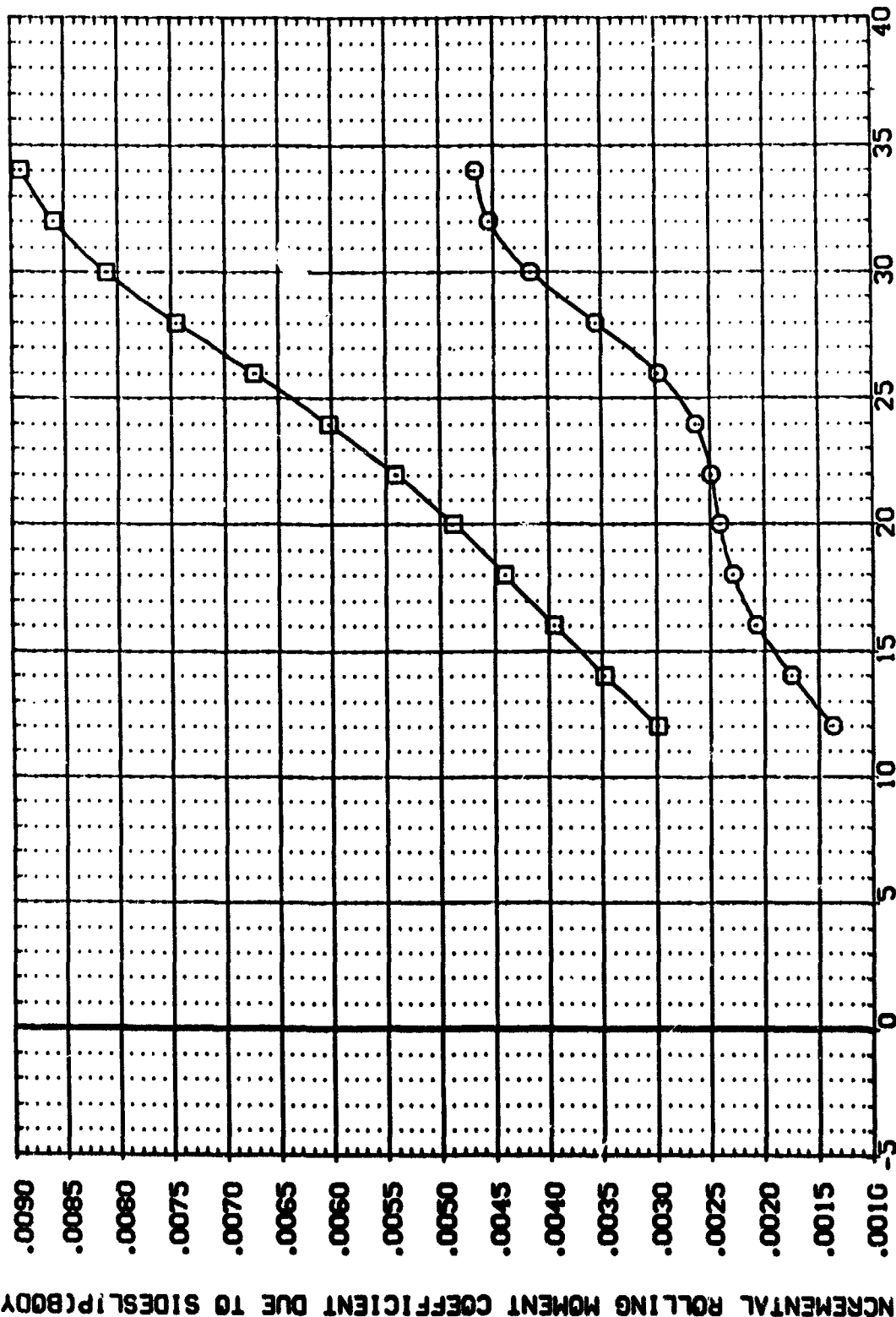
(A)MACH = 4.00

DATA SET SYMBOL: MA-7AUPVT 1031:ROOVELL PER ORB: CONF: BVTN4  
 (APPROX11) MA-7AUPVT 1031:ROOVELL PER ORB: CONF: BVTN4  
 (APPROX12)

DLTBTBTA PO-JET RVN/L  
 -2.500 .000 1.000  
 -5.000 .000 1.000

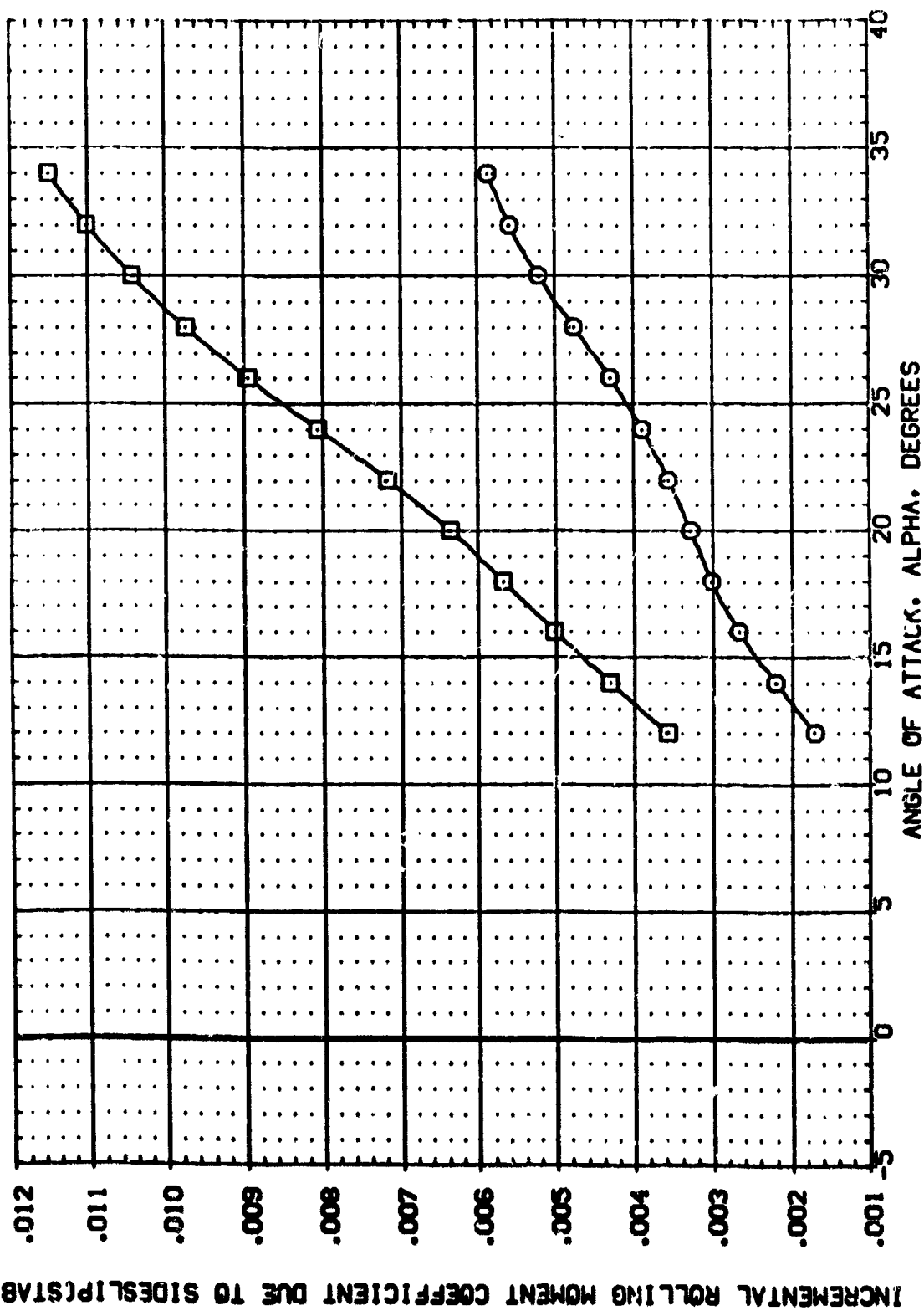
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 LREF 7.9828 INCHES  
 BREF 15.1152 INCHES  
 XREF 12.9510 INCHES  
 YREF .0000 INCHES  
 ZREF 6.0000 INCHES  
 SCALE .0150

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO SIDESLIP (BODY AXIS)



ROLL JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE  
 (A)MACH = 4.00

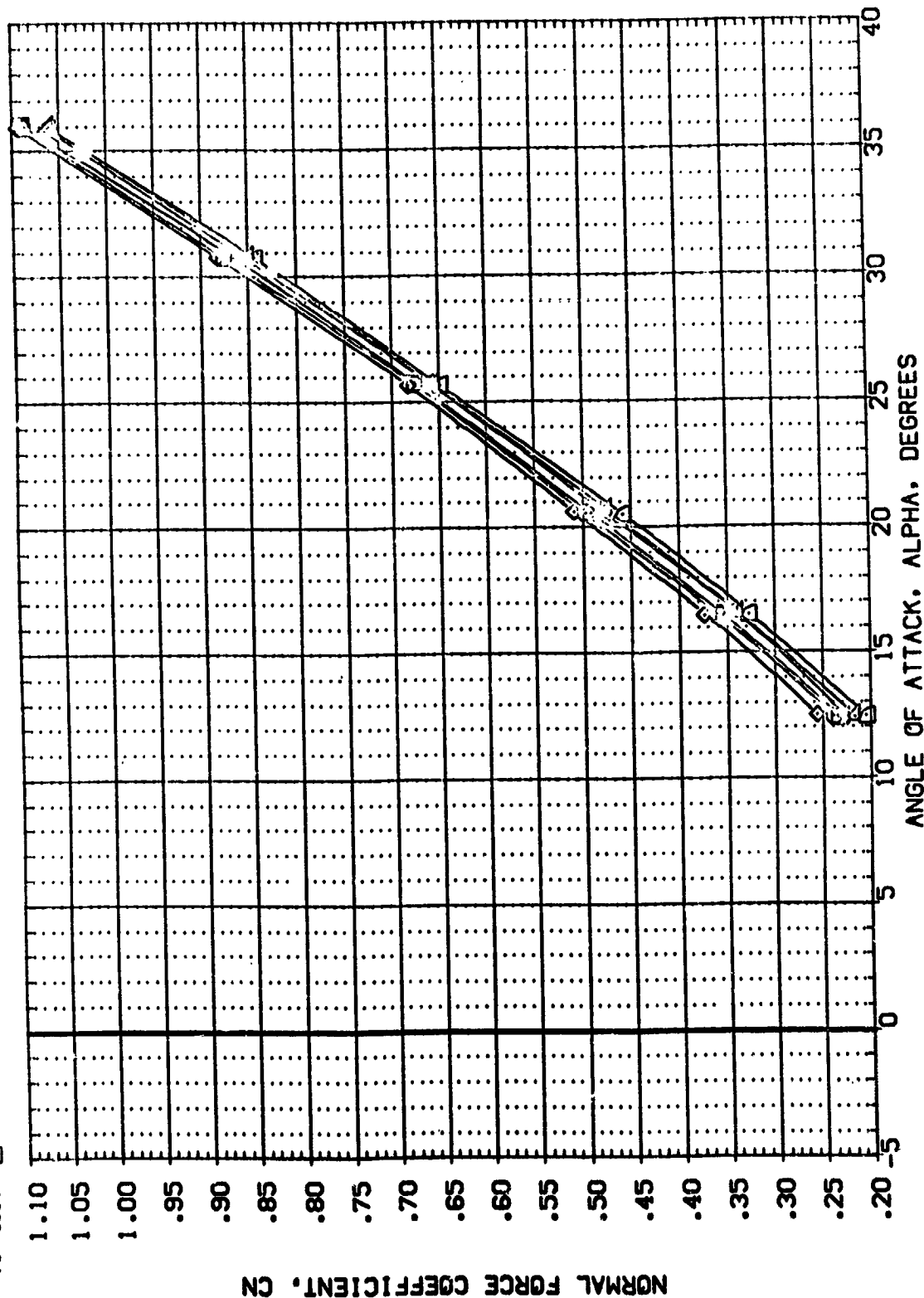
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DLTBT A	PG-JET	RN/L	REFERENCE INFORMATION
(APP011)	MA-7-LPVT 1031. ROORELL PRR 05B. CONF.	-2.500	.000	1.000	SREF 7245 SQ.FT. 50.47
(APP012)	MA-7-LPVT 1031. ROORELL PRR 05B. CONF.	-5.000	.000	1.000	LREF 7.8828 NREF 15.1152 XTRP 12.6510 YTRP 6.0000 ZTRP 6.0000 SCALE .0150



### ROLL-JET INTERFERENCE (INCREMENTAL DATA), EFFECT OF SIDESLIP ANGLE

**(A)HACH = 4.00**

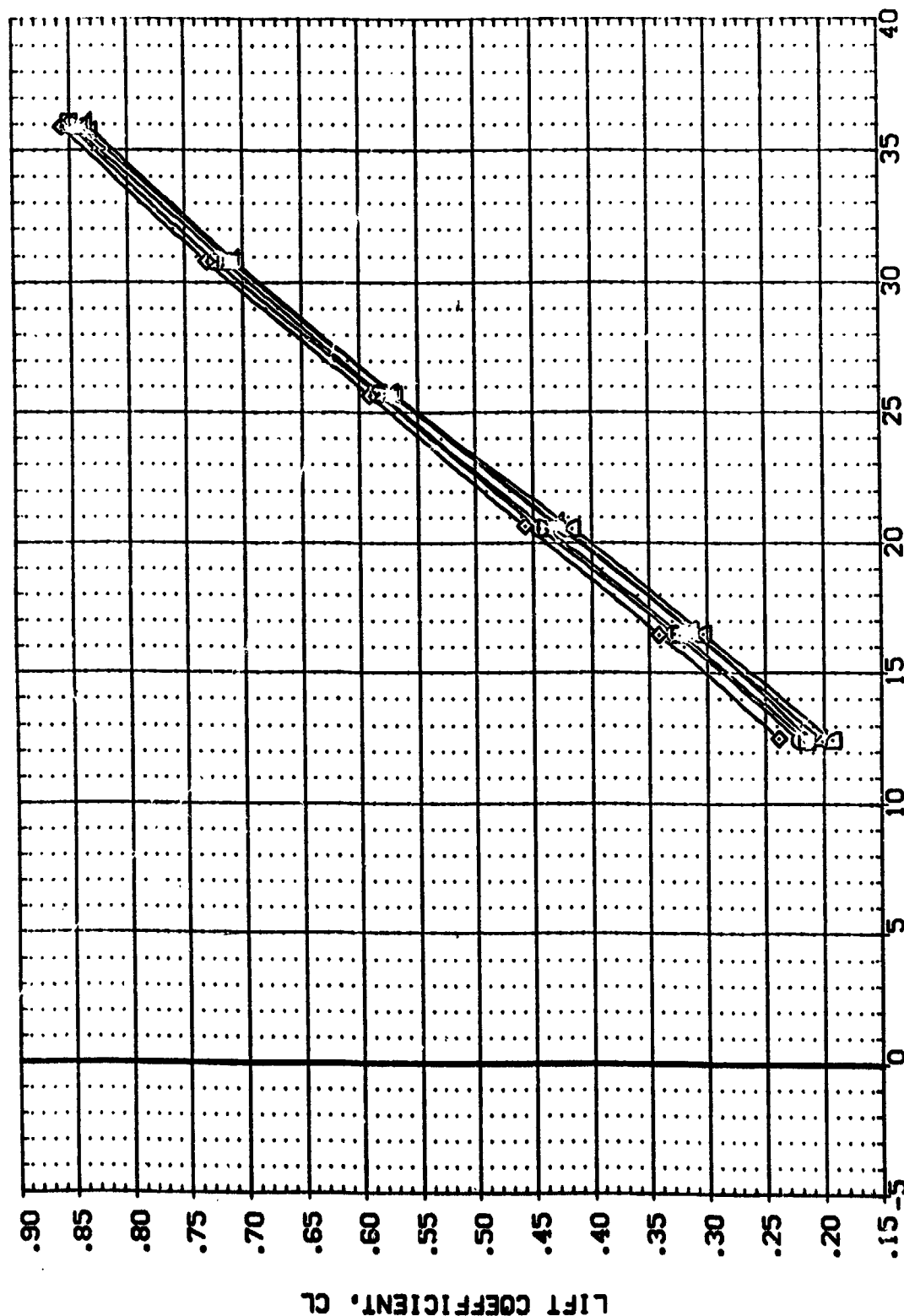
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPM028)	MA-7A-UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	.000	1.000	SREF 7245 SQ.FT.
(CPM060)	MA-7A-UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	37.000	1.000	LREF 7.8828 INCHES
(CPM061)	MA-7A-UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	100.000	1.000	BREF 15.1152 INCHES
(CPM063)	MA-7A-UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	199.000	1.000	XREF 12.5510 INCHES
(CPM064)	MA-7A-UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	328.000	1.000	YREF 6.0000 INCHES
(CPM065)	MA-7A-UPVT 1031. ROCKWELL PRR CRB. CONF.	.000	600.000	1.000	ZREF .0150 INCHES
					SCALE



EFFECT OF PITCH/ROLL JETS FIRING TOWARD WING (LEFT-SIDE JETS ONLY)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RN/L	REFERENCE INFORMATION
(CP058)	MA-7, UPVT 1031, ROCKWELL	.000	.000	1.000	SREF 7.245
(CP059)	MA-7, UPVT 1031, ROCKWELL	.000	37.000	1.000	LREF 7.8828
(CP060)	MA-7, UPVT 1031, ROCKWELL	.000	100.000	1.000	BREF 15.1152
(CP061)	MA-7, UPVT 1031, ROCKWELL	.000	199.000	1.000	XMRP 12.9510
(CP063)	MA-7, UPVT 1031, ROCKWELL	.000	328.000	1.000	YMRP 6.0000
(CP064)	MA-7, UPVT 1031, ROCKWELL	.000	600.000	1.000	ZMRP 6.0000
(CP066)	MA-7, UPVT 1031, ROCKWELL	.000			SCALE .0150

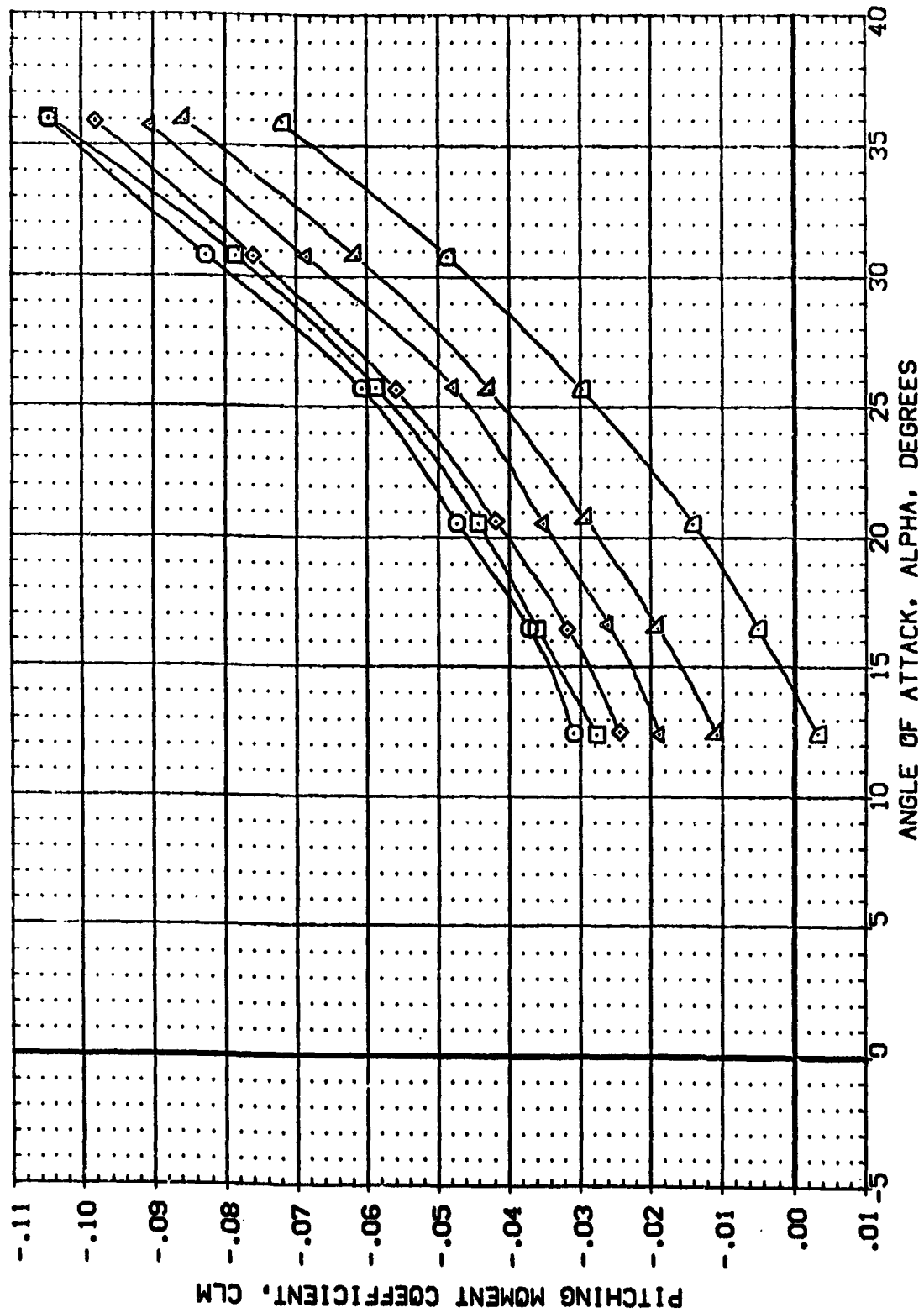


EFFECT OF PITCH/ROLL JETS FIRING TOWARD WING (LEFT-SIDE JETS ONLY)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPM058)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF.	.000	.000	1.000	SREF 7245 SQ.FT.
(CPM059)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF.	.000	37.000	1.000	LBREF 7.8828 INCHES
(CPM060)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF.	.000	100.000	1.000	BRREF 15.1152 INCHES
(CPM061)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF.	.000	199.000	1.000	XRREF 12.9510 INCHES
(CPM062)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF.	.000	328.000	1.000	YRREF 6.0000 INCHES
(CPM063)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF.	.000	600.000	1.000	ZRREF 6.0000 INCHES
(CPM064)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF.				SCALE .0150



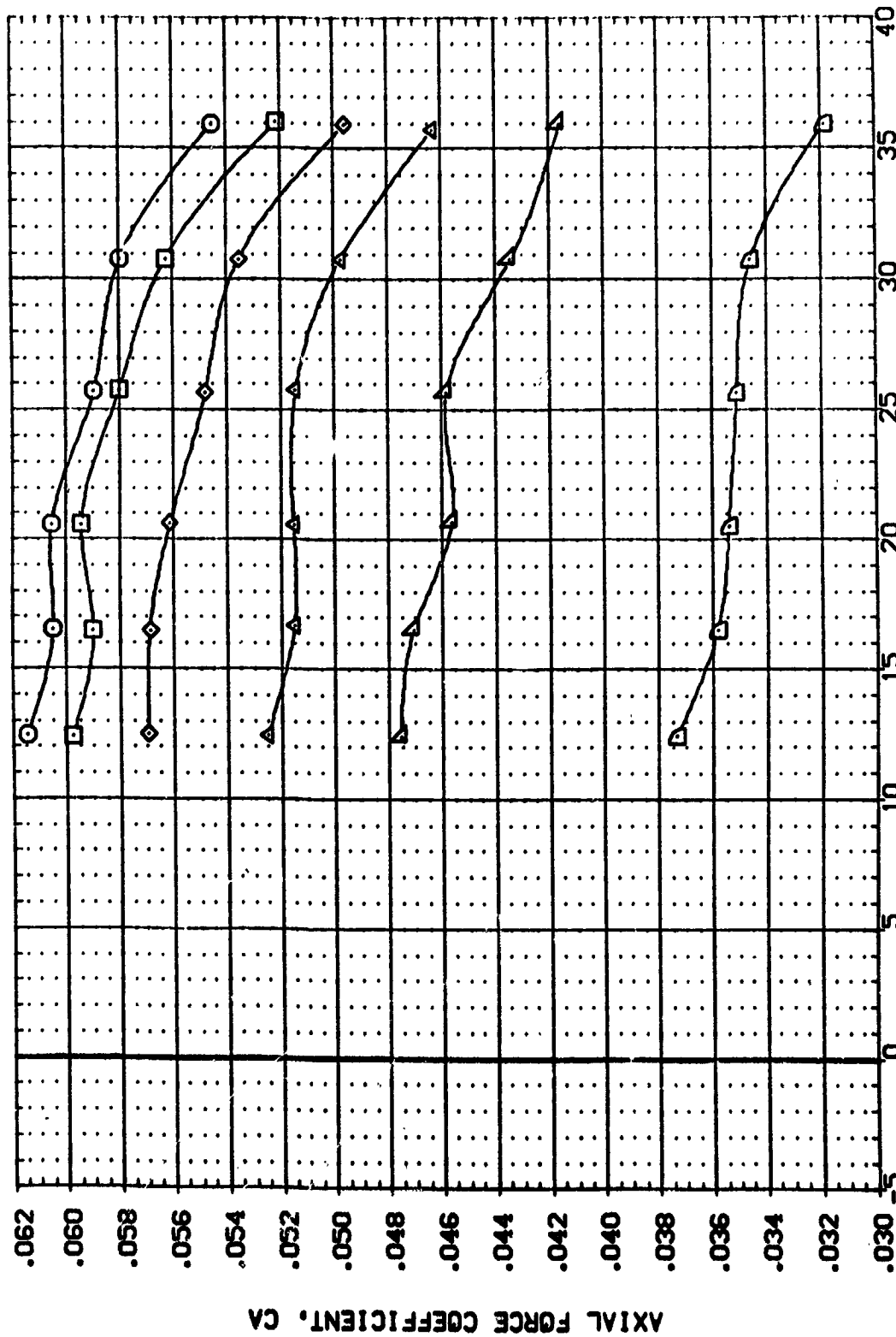
EFFECT OF PITCH/ROLL JETS FIRING TOWARD WING (LEFT-SIDE JETS ONLY)

(MACH = 4.00)



DATA SET SYMBOL CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CONF.	BVTN40	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CPH058)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN40	.000	.000	1.000	SREF 7245 SQ.FT.
(CPH060)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN40	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH061)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN40	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH063)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN40	.000	199.000	1.000	XPRP 12.9510 INCHES
(CPH064)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN40	.000	328.000	1.000	YPRP 10.000 INCHES
(CPH066)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN40	.000	600.000	1.000	ZPRP 6.0000 INCHES
							SCALE .0150

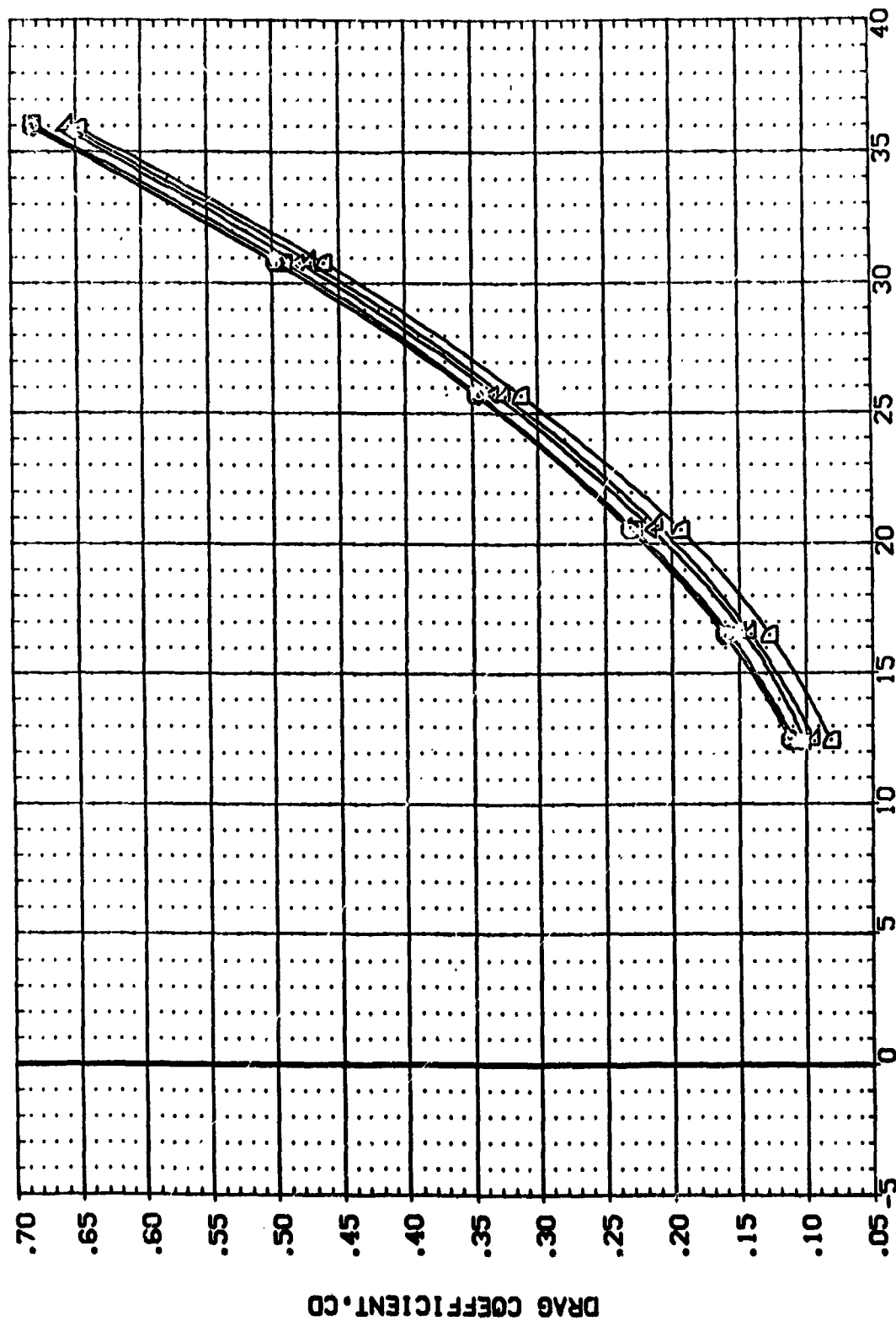


EFFECT OF PITCH/ROLL JETS FIRING TOWARD WING (LEFT-SIDE JETS ONLY)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CONF.	BVTN40	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CP058)	MA-7, UPVT 1031, ROCKVELL PRR CR8.	CONF.	BVTN40	.000	.000	1.000	SREF 7245 SQ. FT.
(CP060)	MA-7, UPVT 1031, ROCKVELL PRR CR8.	CONF.	BVTN40	.000	37.000	1.000	LREF 7.8828 INCHES
(CP061)	MA-7, UPVT 1031, ROCKVELL PRR CR8.	CONF.	BVTN40	.000	100.000	1.000	BREF 15.1152 INCHES
(CP063)	MA-7, UPVT 1031, ROCKVELL PRR CR8.	CONF.	BVTN40	.000	199.000	1.000	XPRP 12.9510 INCHES
(CP064)	MA-7, UPVT 1031, ROCKVELL PRR CR8.	CONF.	BVTN40	.000	328.000	1.000	YPRP .0000 INCHES
(CP066)	MA-7, UPVT 1031, ROCKVELL PRR CR8.	CONF.	BVTN40	.000	600.000	1.000	ZPRP .0000 INCHES
							SCALE .0150

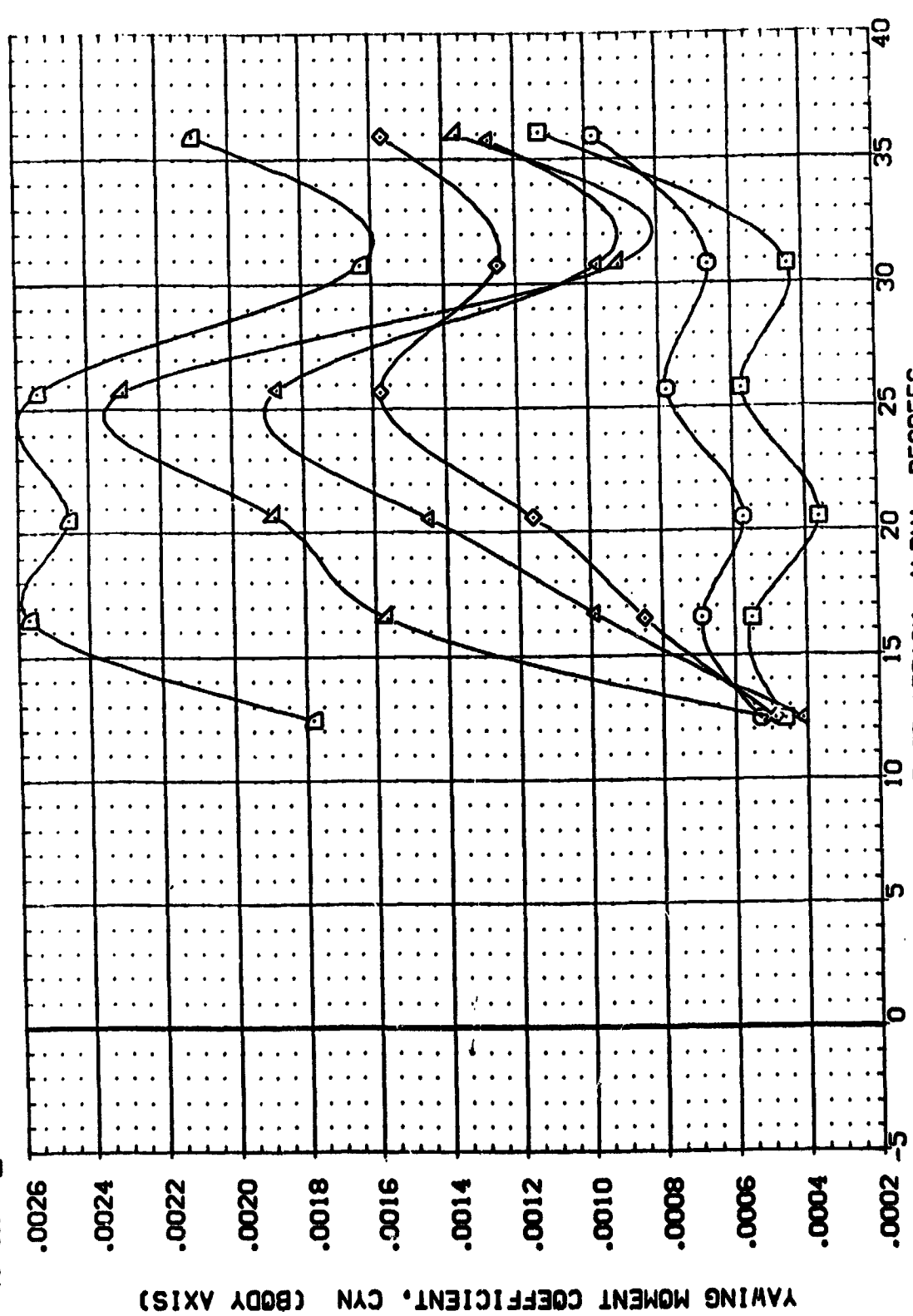


EFFECT OF PITCH/ROLL JETS FIRING TOWARD WING (LEFT-SIDE JETS ONLY)

(M)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH058)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF, BVTN40	.000	.000	1.000	SREF 7245 SC.FT.
(CPH060)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF, BVTN40	.000	37.000	1.000	LREF 7.8628 INCHES
(CPH061)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF, BVTN40	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH063)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF, BVTN40	.000	199.000	1.000	XMRP 12.9510 INCHES
(CPH064)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF, BVTN40	.000	328.000	1.000	YMRP 6.0000 INCHES
(CPH066)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF, BVTN40	.000	600.000	1.000	ZMRP .0150 INCHES
					SCALE



EFFECT OF PITCH/ROLL JETS FIRING TOWARD WING (LEFT-SIDE JETS ONLY)

(A)MACH = 4.00

REFERENCE INFORMATION

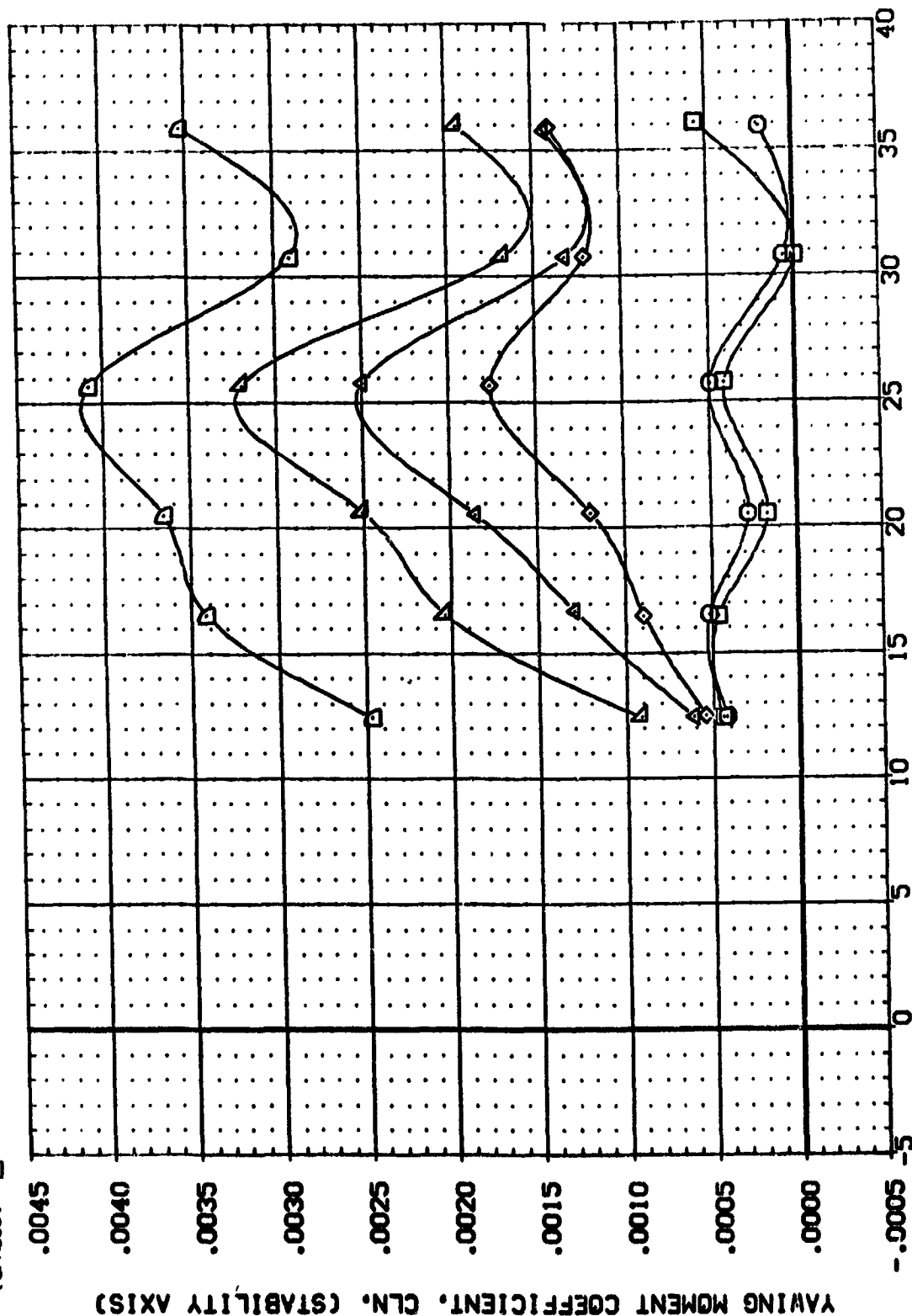
SREF	7245	sq.ft.
LREF	7.8828	inches
BREF	15.1152	inches
XPBP	12.6510	inches
YMRP	0.0000	inches
ZMRP	6.0000	inches
SCALE	0.150	

BETA PO-JET RV/L

BETA	PO-JET	RV/L
.000	.000	1.000
.000	37.000	1.000
.000	100.000	1.000
.000	198.000	1.000
.000	328.000	1.000
.000	600.000	1.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

MA-7, UPVT	1031, ROCKWELL	PRR	088	CONF	BVTN40
(CPH058)					BVTN40
MA-7, UPVT	1031, ROCKWELL	PRR	088	CONF	BVTN40
(CPH060)					BVTN40
MA-7, UPVT	1031, ROCKWELL	PRR	088	CONF	BVTN40
(CPH061)					BVTN40
MA-7, UPVT	1031, ROCKWELL	PRR	088	CONF	BVTN40
(CPH062)					BVTN40
MA-7, UPVT	1031, ROCKWELL	PRR	088	CONF	BVTN40
(CPH063)					BVTN40
MA-7, UPVT	1031, ROCKWELL	PRR	088	CONF	BVTN40
(CPH066)					BVTN40



EFFECT OF PITCH/ROLL JETS FIRING TOWARD WING (LEFT-SIDE JETS ONLY)

(A)MACH = 4.00



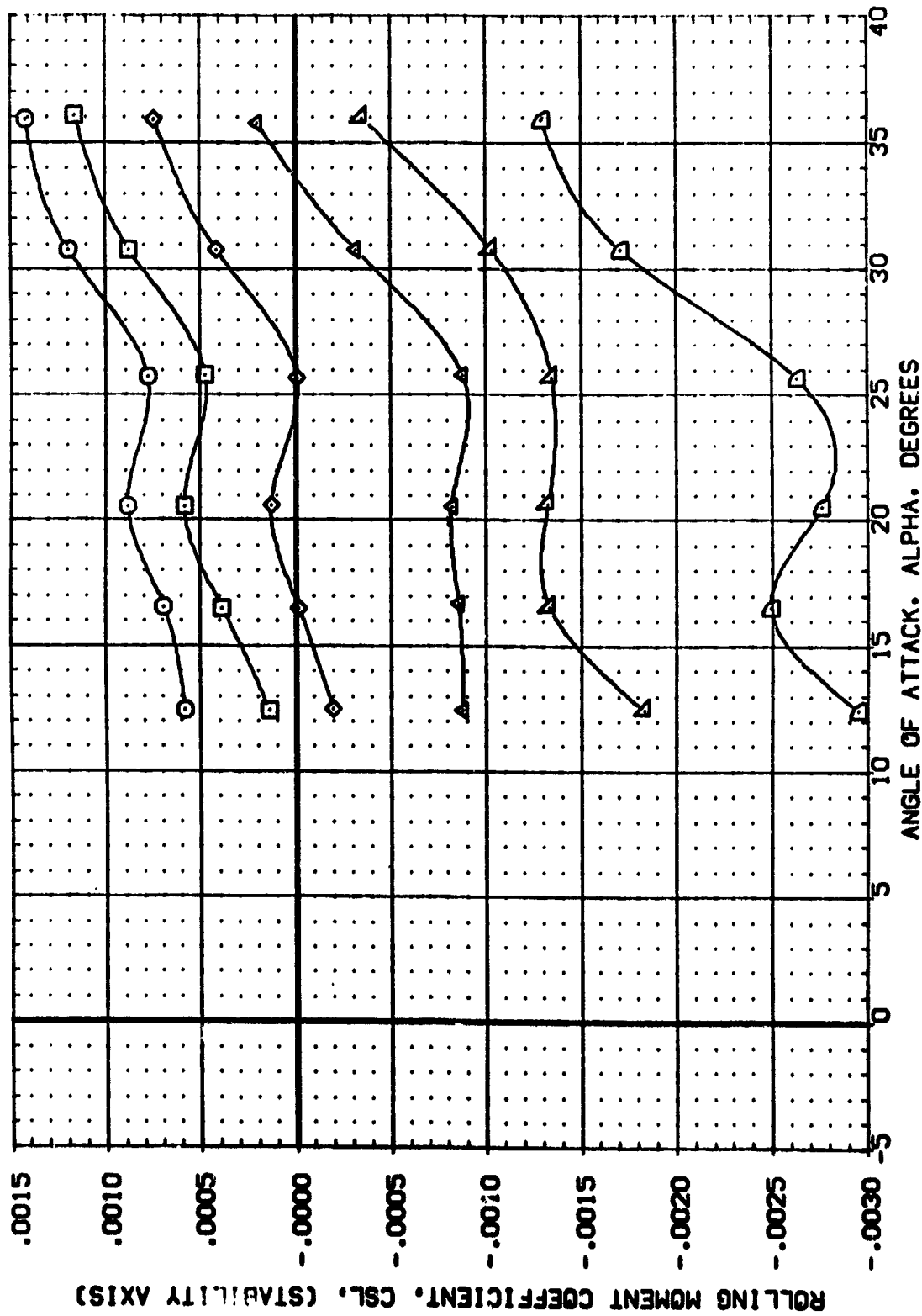
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RNVL	REFERENCE INFORMATION
(CP059)	MA-7.UPT 1031.RCKVELL PRR CR8. CONF.	.000	.000	1.000	SREF 7.245 SQ.FT.
(CP060)	MA-7.UPT 1031.RCKVELL PRR CR8. CONF.	.000	37.000	1.000	LREF 7.8828 INCHES
(CP061)	MA-7.UPT 1031.RCKVELL PRR CR8. CONF.	.000	100.000	1.000	BREF 15.1152 INCHES
(CP062)	MA-7.UPT 1031.RCKVELL PRR CR8. CONF.	.000	199.000	1.000	YMRP 12.5510 INCHES
(CP063)	MA-7.UPT 1031.RCKVELL PRR CR8. CONF.	.000	328.000	1.000	ZMRP .0000 INCHES
(CP066)	MA-7.UPT 1031.RCKVELL PRR CR8. CONF.	.000	600.000	1.000	SCALE .0150



EFFECT OF PITCH/ROLL JETS FIRING TOWARD WING (LEFT-SIDE JETS ONLY)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVL	REFERENCE INFORMATION
(CP058)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	.000	1.000	SREF .7245 SQ.FT.
(CP059)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	37.000	1.000	LREF 7.8828 INCHES
(CP060)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	100.000	1.000	BREF 15.1152 INCHES
(CP061)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	198.000	1.000	XMRP 12.9610 INCHES
(CP062)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	328.000	1.000	YMRP 6.0000 INCHES
(CP063)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000	600.000	1.000	ZMRP 6.0000 INCHES
(CP064)	MA-7-UPVT 1031-ROCKWELL PRR ORB. CONF.	.000			SCALE .0150



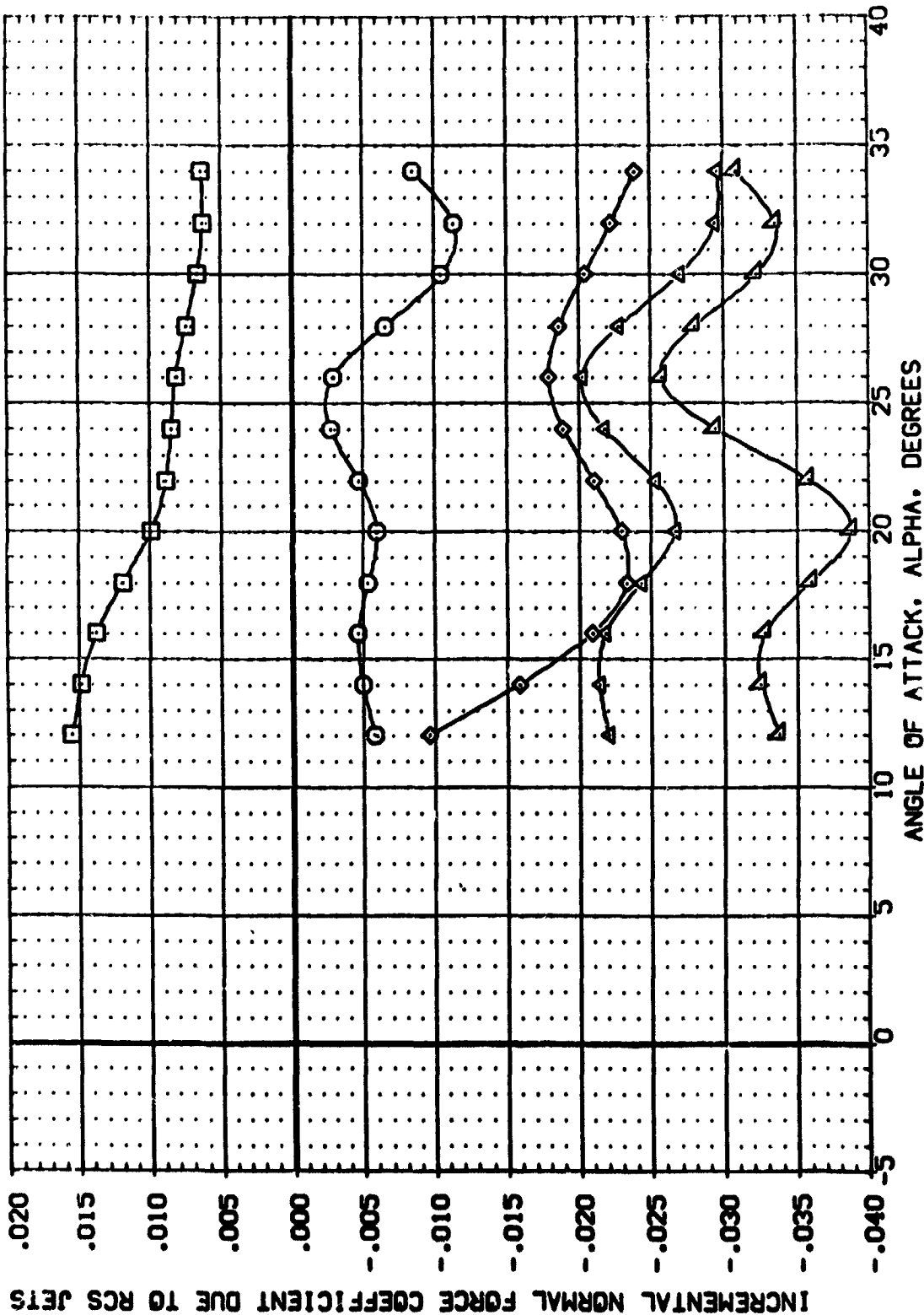
EFFECT OF PITCH/ROLL JETS FIRING TOWARD WING (LEFT-SIDE JETS ONLY)

(A)RACH = 4.00



DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA DLP0-J RV/L REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLP0-J	RV/L	REFERENCE INFORMATION
(AP050)	MA-7:LPVT 1031:ROCKWELL PRR CRB. CONF.	.000	37.000	1.000	SREF 7245 SO.FT.
(AP051)	MA-7:LPVT 1031:ROCKWELL PRR CRB. CONF.	.000	100.000	1.000	LREF 7.8228 INCHES
(AP052)	MA-7:LPVT 1031:ROCKWELL PRR CRB. CONF.	.000	199.000	1.000	BREF 15.1152 INCHES
(AP053)	MA-7:LPVT 1031:ROCKWELL PRR CRB. CONF.	.000	328.000	1.000	XREF 12.9510 INCHES
(AP054)	MA-7:LPVT 1031:ROCKWELL PRR CRB. CONF.	.000	600.000	1.000	YREF 6.0000 INCHES
(AP055)	MA-7:LPVT 1031:ROCKWELL PRR CRB. CONF.	.000	600.000	1.000	ZREF 6.0000 INCHES
					SCALE 0.150

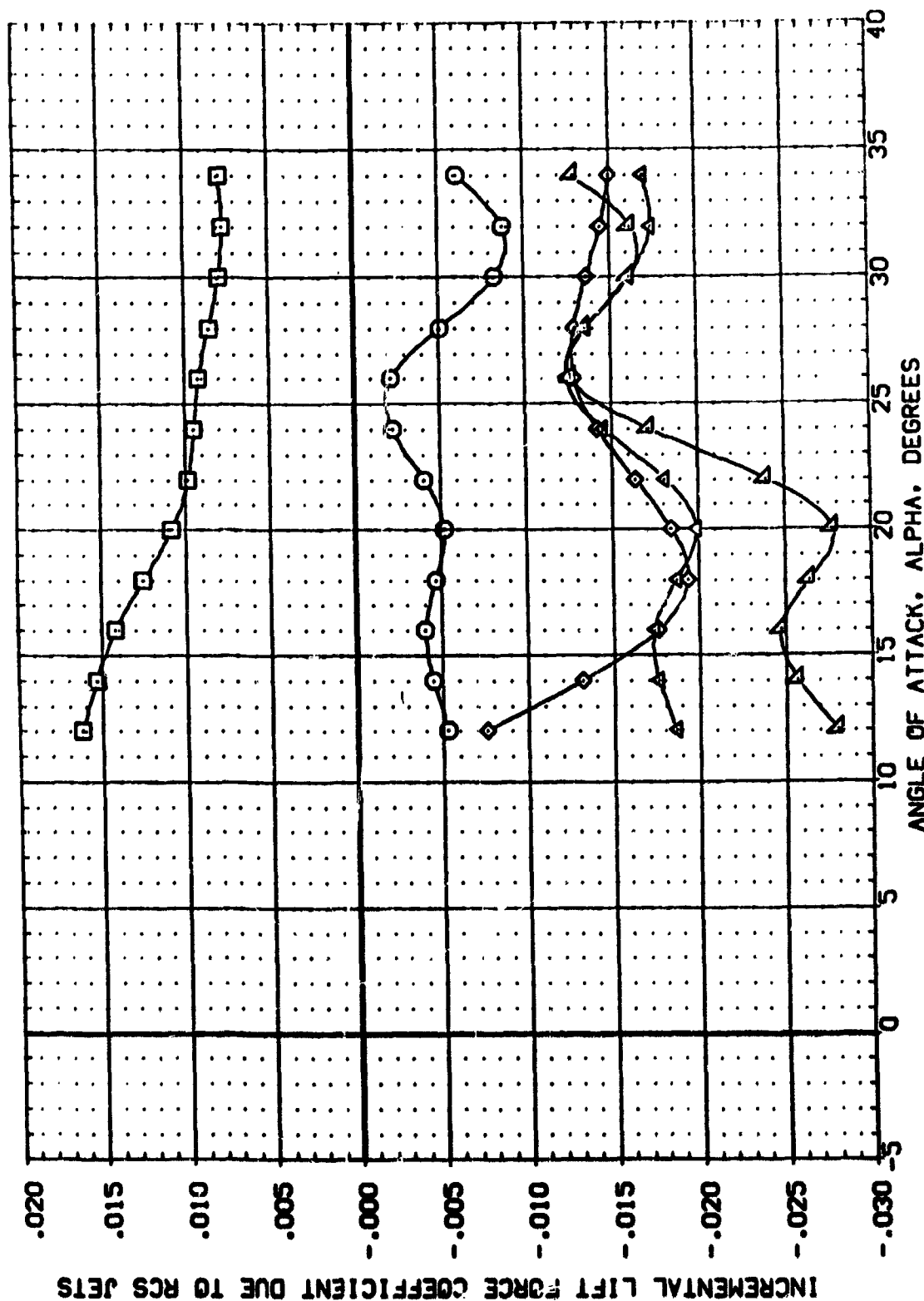


INTERFERENCE EFFECTS OF LEFT-SIDE PITCH/ROLL JETS FIRING TOWARD WING(INCREMENTS)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVAL	REFERENCE INFORMATION
(AP060)	MA-7:UPAT 1031:ROCKWELL PRR ORB. CONF.	.000	37.000	1.000	SREF 7245
(AP061)	MA-7:UPAT 1031:ROCKWELL PRR ORB. CONF.	.000	100.000	1.000	LREF 7.8328
(AP062)	MA-7:UPAT 1031:ROCKWELL PRR ORB. CONF.	.000	199.000	1.000	BREF 15.1152
(AP063)	MA-7:UPAT 1031:ROCKWELL PRR ORB. CONF.	.000	328.000	1.000	YREF 12.8670
(AP064)	MA-7:UPAT 1031:ROCKWELL PRR ORB. CONF.	.000	600.000	1.000	YREF 12.8670
(AP065)	MA-7:UPAT 1031:ROCKWELL PRR ORB. CONF.	.000	600.000	1.000	YREF 12.8670
					SCALE 6.0153

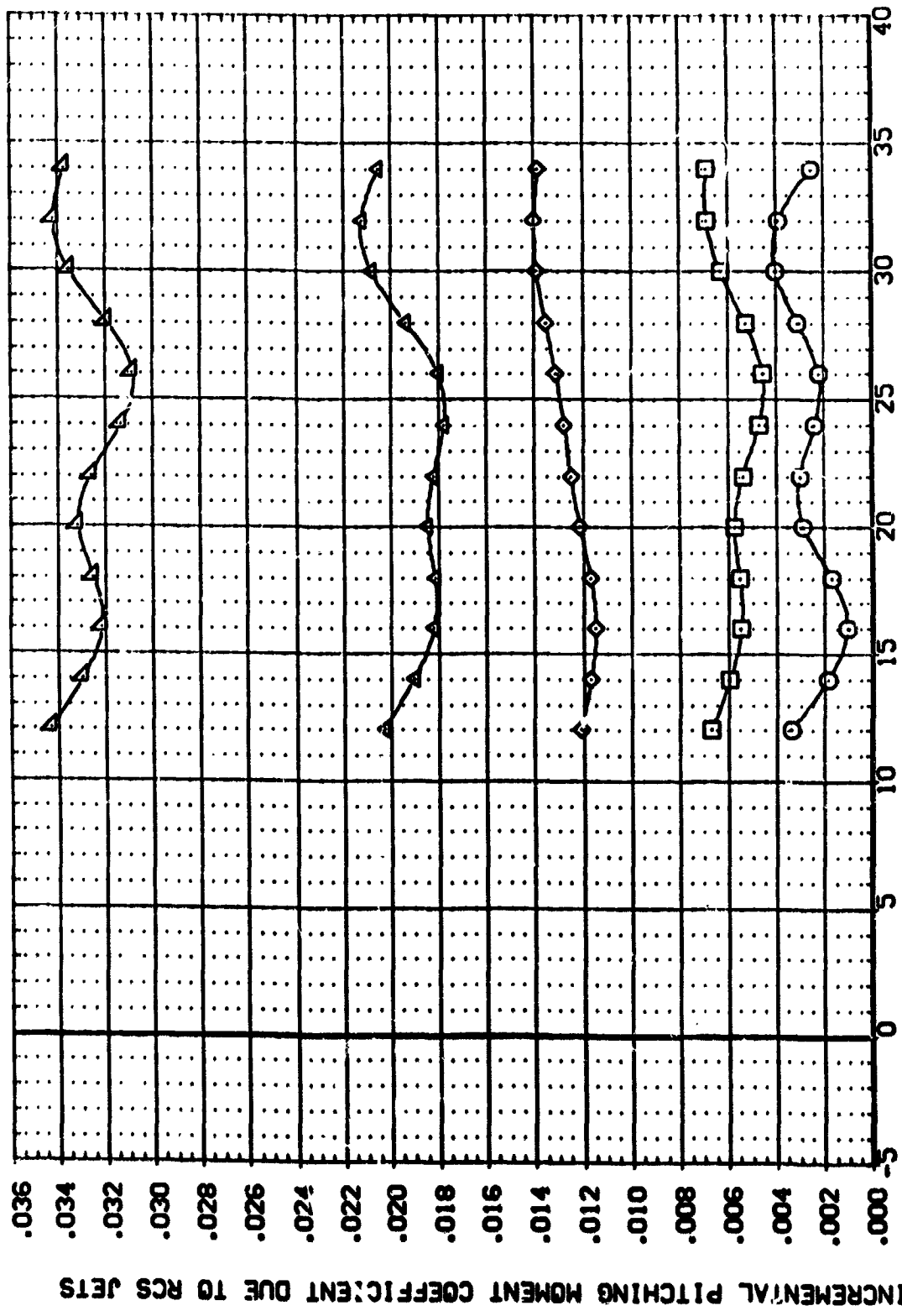


INTERFERENCE EFFECTS OF LEFT-SIDE PITCH/ROLL JETS FIRING TOWARD WING (INCREMENTS)

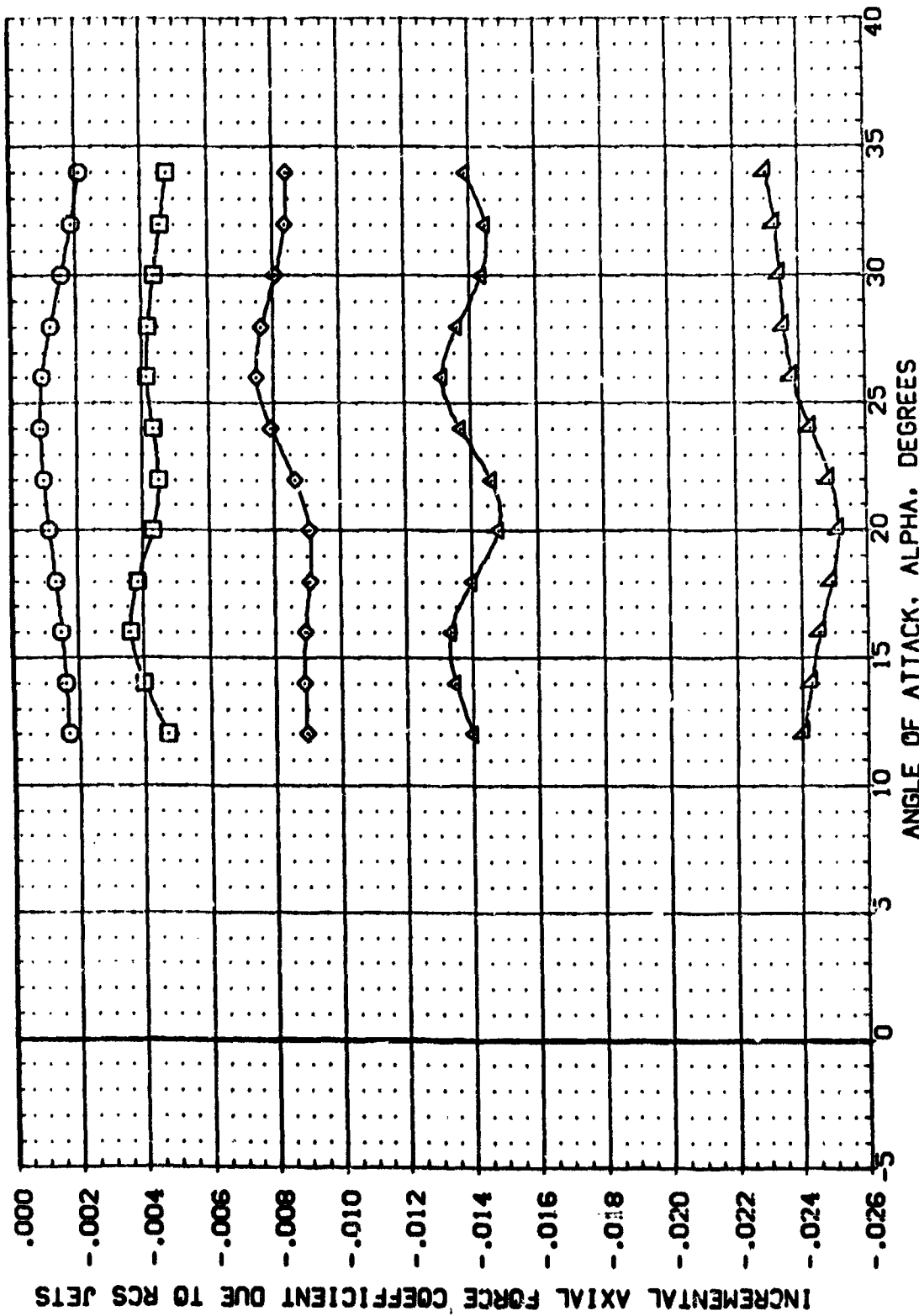
(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVL	REFERENCE INFORMATION
(AP060)	MA-7-LPVT 1031-ROCKWELL PRR C08	.000	37.000	1.000	SREF 7.245 SO.FT.
(AP061)	MA-7-LPVT 1031-ROCKWELL PRR C08	.000	100.000	1.000	LREF 7.8928 INCHES
(AP062)	MA-7-LPVT 1031-ROCKWELL PRR C08	.000	199.000	1.000	BREF 15.1152 INCHES
(AP063)	MA-7-LPVT 1031-ROCKWELL PRR C08	.000	328.000	1.000	XREF 12.9513 INCHES
(AP064)	MA-7-LPVT 1031-ROCKWELL PRR C08	.000	600.000	1.000	YREF 6.0000 INCHES
(AP065)	MA-7-LPVT 1031-ROCKWELL PRR C08	.000	600.000	1.000	ZREF 6.0150 INCHES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RV/L	REFERENCE INFORMATION
(A)POG01	MA-7.UPT 1031. ROCKWELL PRR DBB	.000	37.000	1.000	SREF .7245 50. FT.
(A)POG02	MA-7.UPT 1031. ROCKWELL PRR DBB	.000	100.000	1.000	LREF 7.8828 INCHES
(A)POG03	MA-7.UPT 1031. ROCKWELL PRR DBB	.000	199.000	1.000	BREF 15.1152 INCHES
(A)POG04	MA-7.UPT 1031. ROCKWELL PRR DBB	.000	328.000	1.000	XREF 12.9510 INCHES
(A)POG05	MA-7.UPT 1031. ROCKWELL PRR DBB	.000	600.000	1.000	YREF 6.0000 INCHES
(A)POG06	MA-7.UPT 1031. ROCKWELL PRR DBB	.000	600.000	1.000	ZREF 6.0000 INCHES
					SCALE .0150



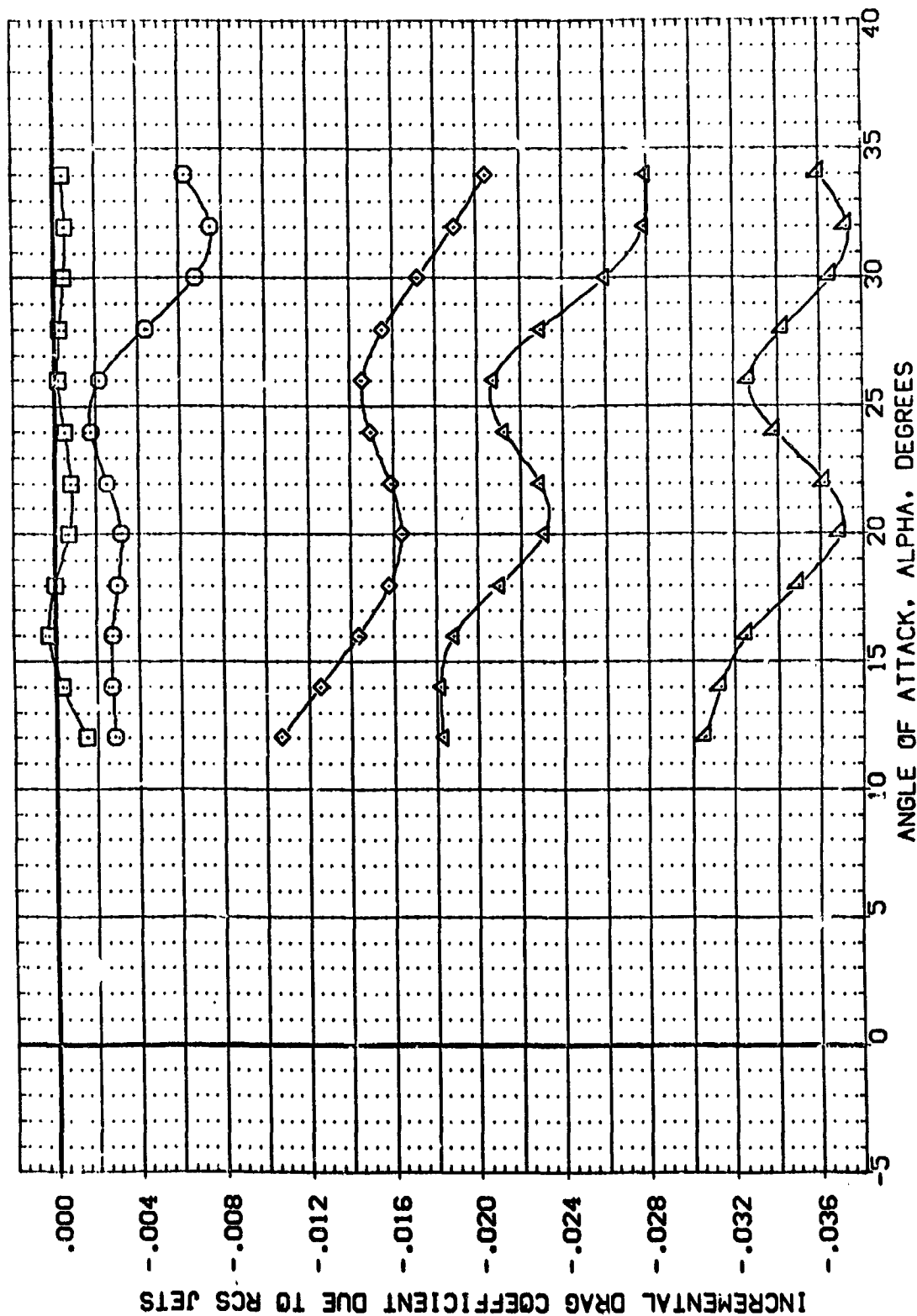
INTERFERENCE EFFECTS OF LEFT-SIDE PITCH/ROLL JETS FIRING TOWARD WING (INCREMENTS)

(A)MACH = 4.00

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DATA SET SYMBO	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(APR060)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.003	37.000	1.000	SREF 7245 SQ.FT.
(APR061)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.003	100.000	1.000	LREF 7.6328 INCHES
(APR063)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.003	199.000	1.000	BREF 12.1152 INCHES
(APR064)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.003	328.000	1.000	YMFP 6.0000 INCHES
(APR066)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.003	600.000	1.000	ZMRP 6.0000 INCHES
					SCALE .0050

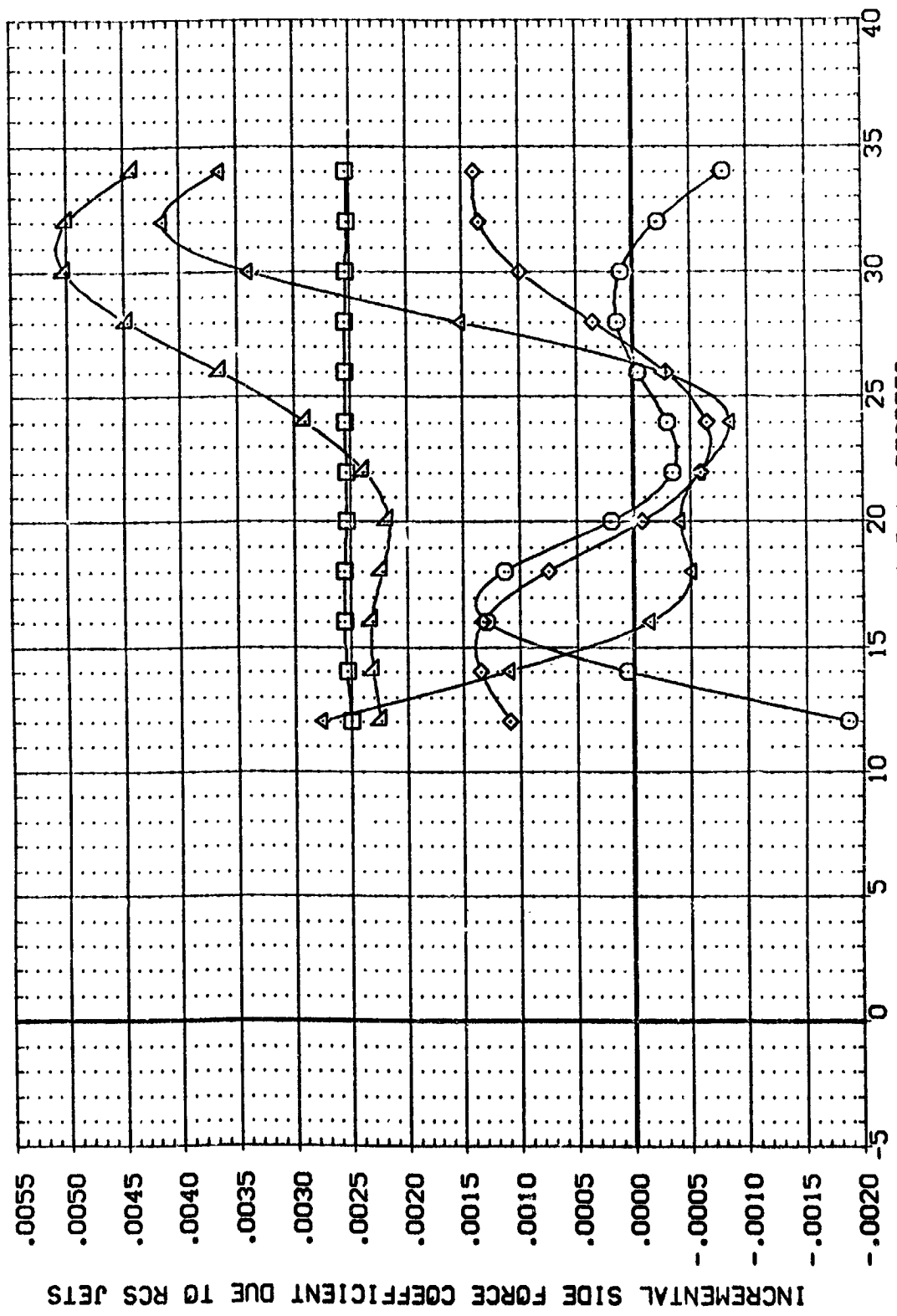


INTERFERENCE EFFECTS OF LEFT-SIDE PITCH/ROLL JETS FIRING TOWARD WING(INCREMENTS)

(A)MACH = 4.00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(AP05G)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	37.000	1.000	SREF 7.245 SQ.FT.
(AP05I)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	100.000	1.000	LREF 7.8828 INCHES
(AP05J)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	199.000	1.000	BREF 15.1152 INCHES
(AP05K)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	328.000	1.000	XREF 12.9510 INCHES
(AP05L)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	600.000	1.000	YREF 6.0000 INCHES
(AP05M)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	600.000	1.000	ZREF 6.0000 INCHES
(AP05N)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	600.000	1.000	SCALE .0150



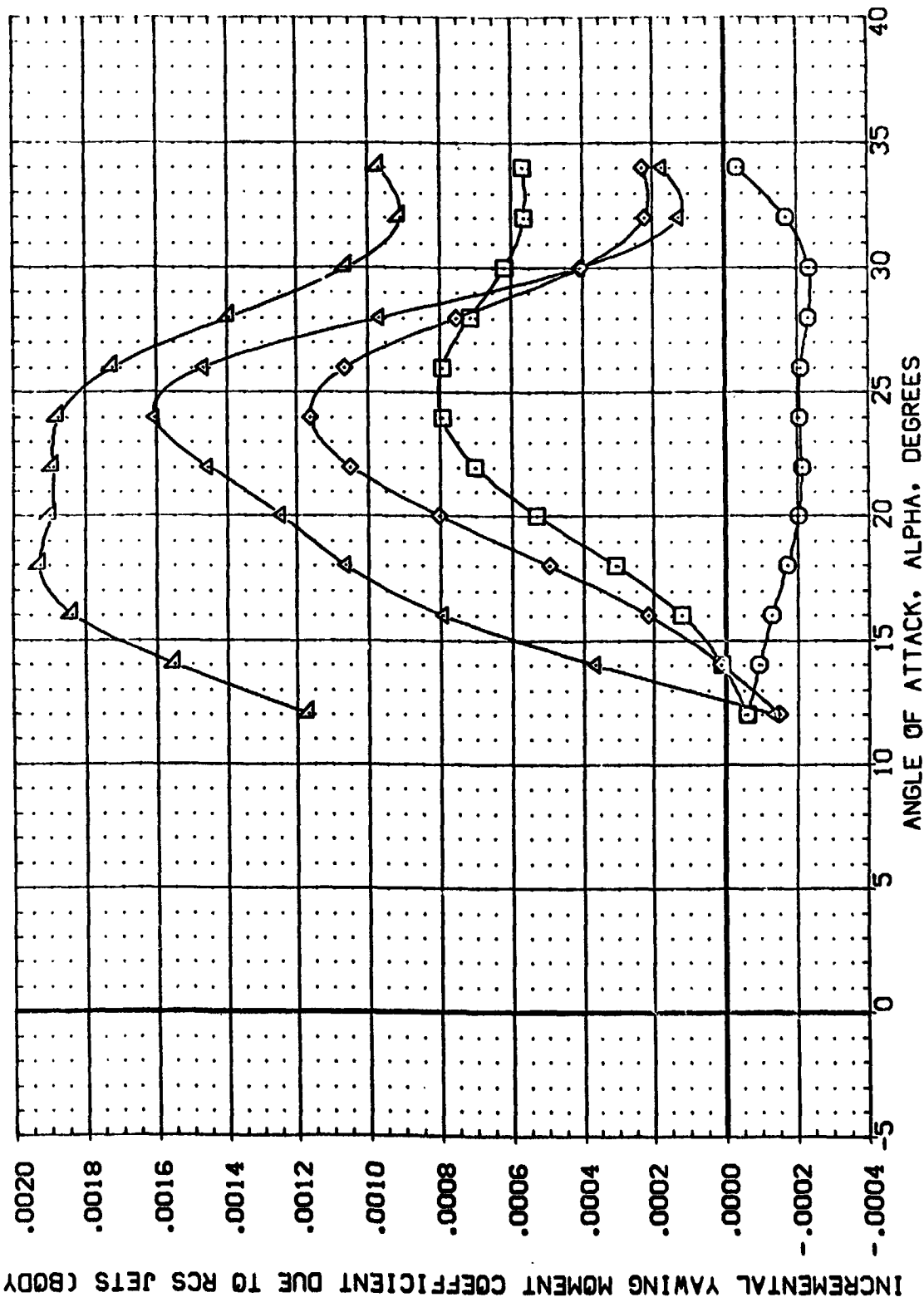
INTERFERENCE EFFECTS OF LEFT-SIDE PITCH/ROLL JETS FIRING TOWARD WING (INCREMENTS)

(A)MACH = 4.00

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DATA SET SYMBOL    CONFIGURATION DESCRIPTION    ORB. CONF.    BVTN40    BETA    DLP0-J    RNVL    REFERENCE INFORMATION

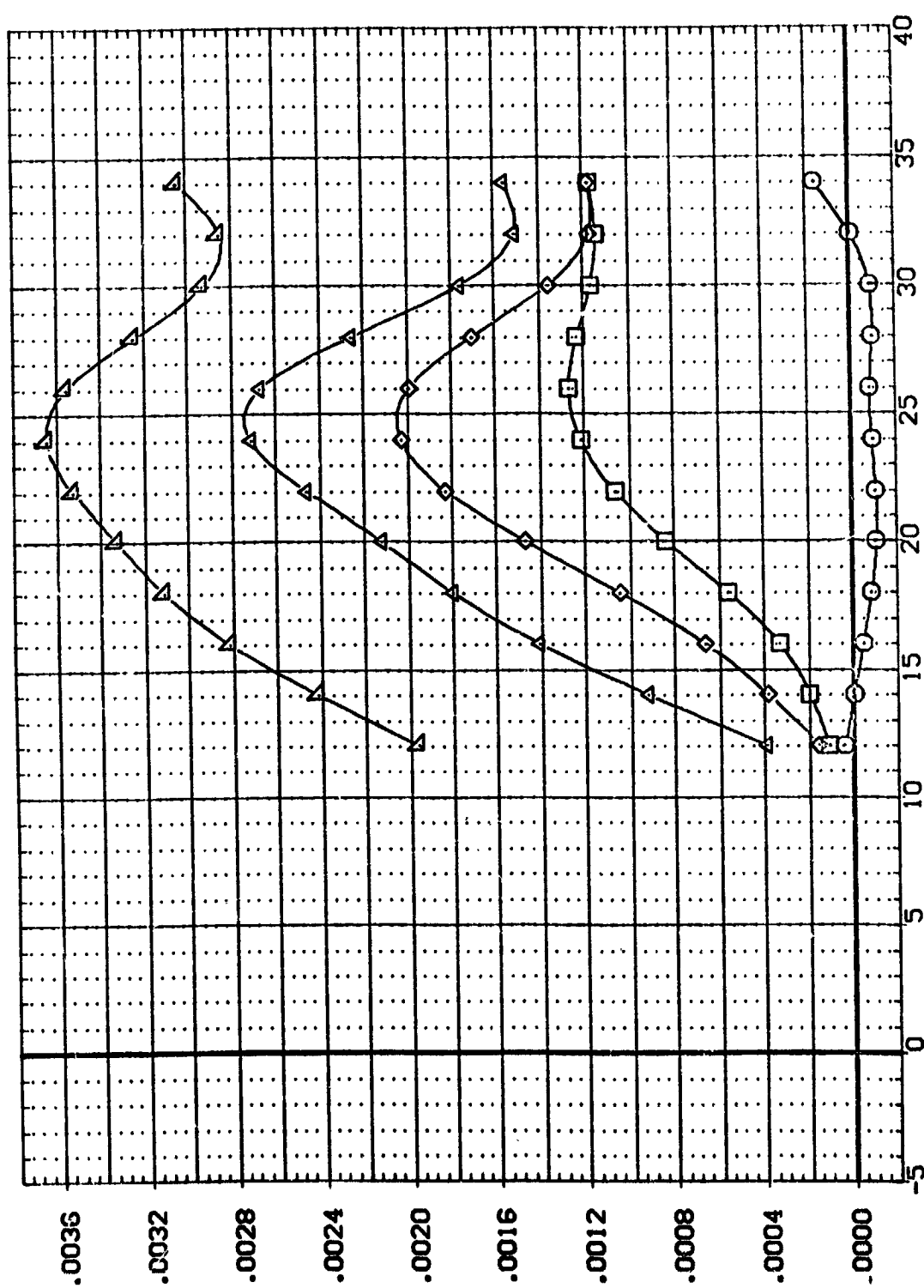
(APM00)	MA-7, UPVT	1031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	.000	37.000	1.000	SREF	.7245	50. FT.
(APM01)	MA-7, UPVT	1031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	.000	100.000	1.000	LREF	7.8828	NO. OF
(APM02)	MA-7, UPVT	1031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	.000	199.000	1.000	BREF	15.1152	NO. OF
(APM03)	MA-7, UPVT	1031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	.000	328.000	1.000	YMRP	12.9513	NO. OF
(APM04)	MA-7, UPVT	1031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	.000	600.000	1.000	ZMRP	6.0000	NO. OF
(APM05)	MA-7, UPVT	1031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	.000	600.000	1.000	SCALE	6.0150	NO. OF



INTERFERENCE EFFECTS OF LEFT-SIDE PITCH/ROLL JETS FIRING TOWARD WING (INCREMENTS)

# INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (STABILITY AXIS)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORB.	CONV.	BVTN40	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(AP1050)	MA-7,UPVT 1031,ROCKWELL PRR ORB.	CONV.	BVTN40	.000	37.000	1.000	SREF	7245 50.FT.
(AP1051)	MA-7,UPVT 1031,ROCKWELL PRR ORB.	CONV.	BVTN40	.000	100.000	1.000	LREF	7.8828 INCHES
(AP1053)	MA-7,UPVT 1031,ROCKWELL PRR ORB.	CONV.	BVTN40	.000	199.000	1.000	SREF	15.1152 INCHES
(AP1054)	MA-7,UPVT 1031,ROCKWELL PRR ORB.	CONV.	BVTN40	.000	328.000	1.000	XREF	12.9510 INCHES
(AP1056)	MA-7,UPVT 1031,ROCKWELL PRR ORB.	CONV.	BVTN40	.000	600.000	1.000	YREF	6.0000 INCHES
							ZREF	.0150 INCHES
							SCALE	

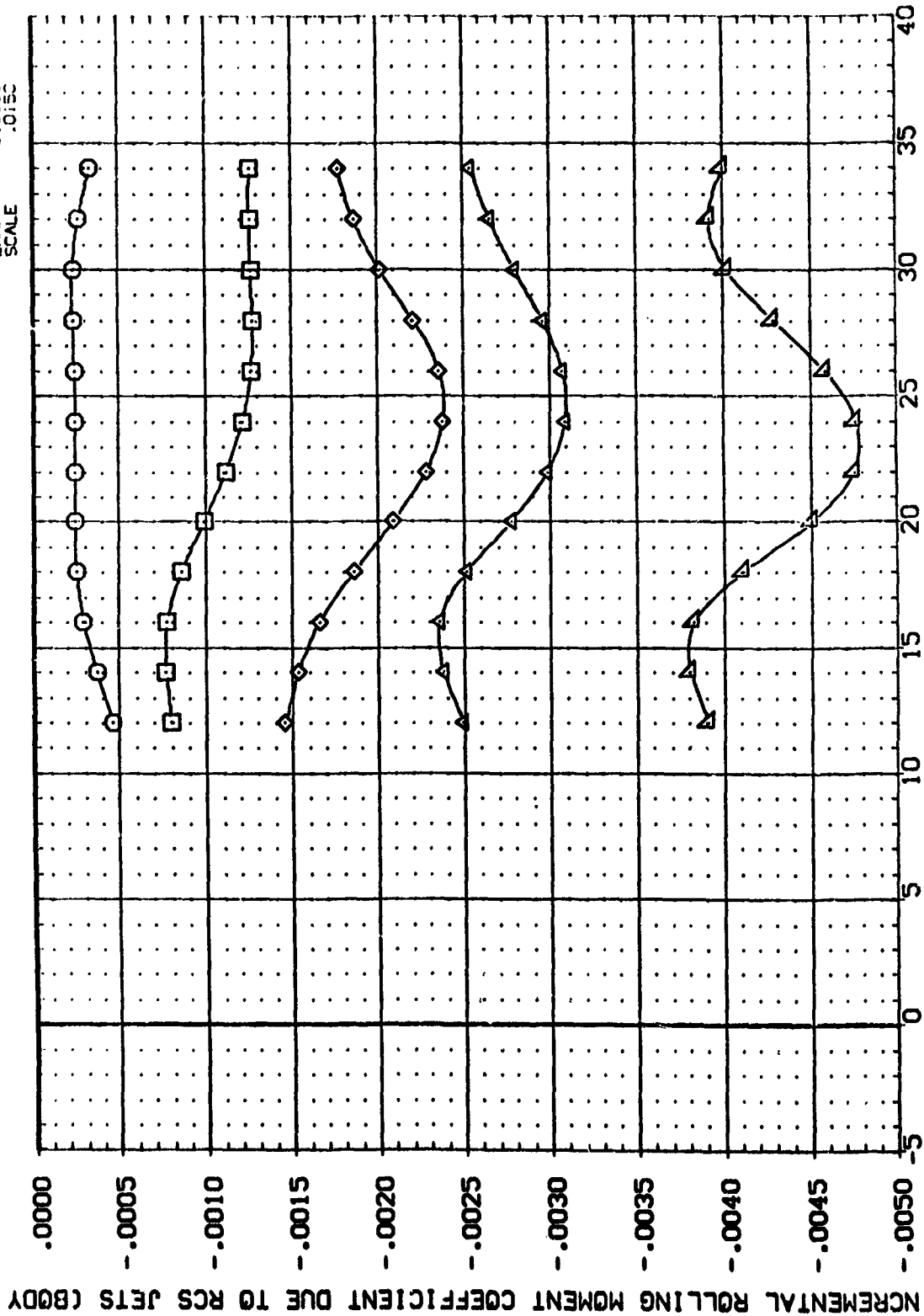


INTERFERENCE EFFECTS OF LEFT-SIDE PITCH/ROLL JETS FIRING TOWARD WING (INCREMENTS)  
(A)MACH = 4.00



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(APM050)	MA-7, UPVT	031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	BETA	DLPQ-J	RVL	REFERENCE INFORMATION
(APM051)	MA-7, UPVT	031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	.000	37.000	1.000	SREF 7245
(APM053)	MA-7, UPVT	031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	.000	100.000	1.000	LREF 7.8828
(APM054)	MA-7, UPVT	031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	.000	199.000	1.000	BREF 15.1152
(APM056)	MA-7, UPVT	031, ROCKWELL	PRR	ORB.	CONF.	BVTN40	.000	329.000	1.000	XPRP 12.8510
							.000	600.000	1.000	YMRP 6.0000
										ZMRP 6.0000
										SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

INTERFERENCE EFFECTS OF LEFT-SIDE PITCH/ROLL JETS FIRING TOWARD WING (INCREMENTS)

(A)MACH = 4.00

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DATA SET SYMBOL    CONFIGURATION DESCRIPTION    DRB    CONE    BVTN40    BETA    DLPO-J    RV/L    REFERENCE INFORMATION

(APMDS0)    MA-7-LPVT    1031    ROCKWELL    PRR    CRB    CONE    BVTN40    .000    37.000    .000    SREF    7245    50. FT.

(APMDS1)    MA-7-LPVT    1031    ROCKWELL    PRR    CRB    CONE    BVTN40    .000    100.000    .000    LREF    7.8828    INCHES

(APMDS2)    MA-7-LPVT    1031    ROCKWELL    PRR    CRB    CONE    BVTN40    .000    159.000    .000    BREF    15.1152    INCHES

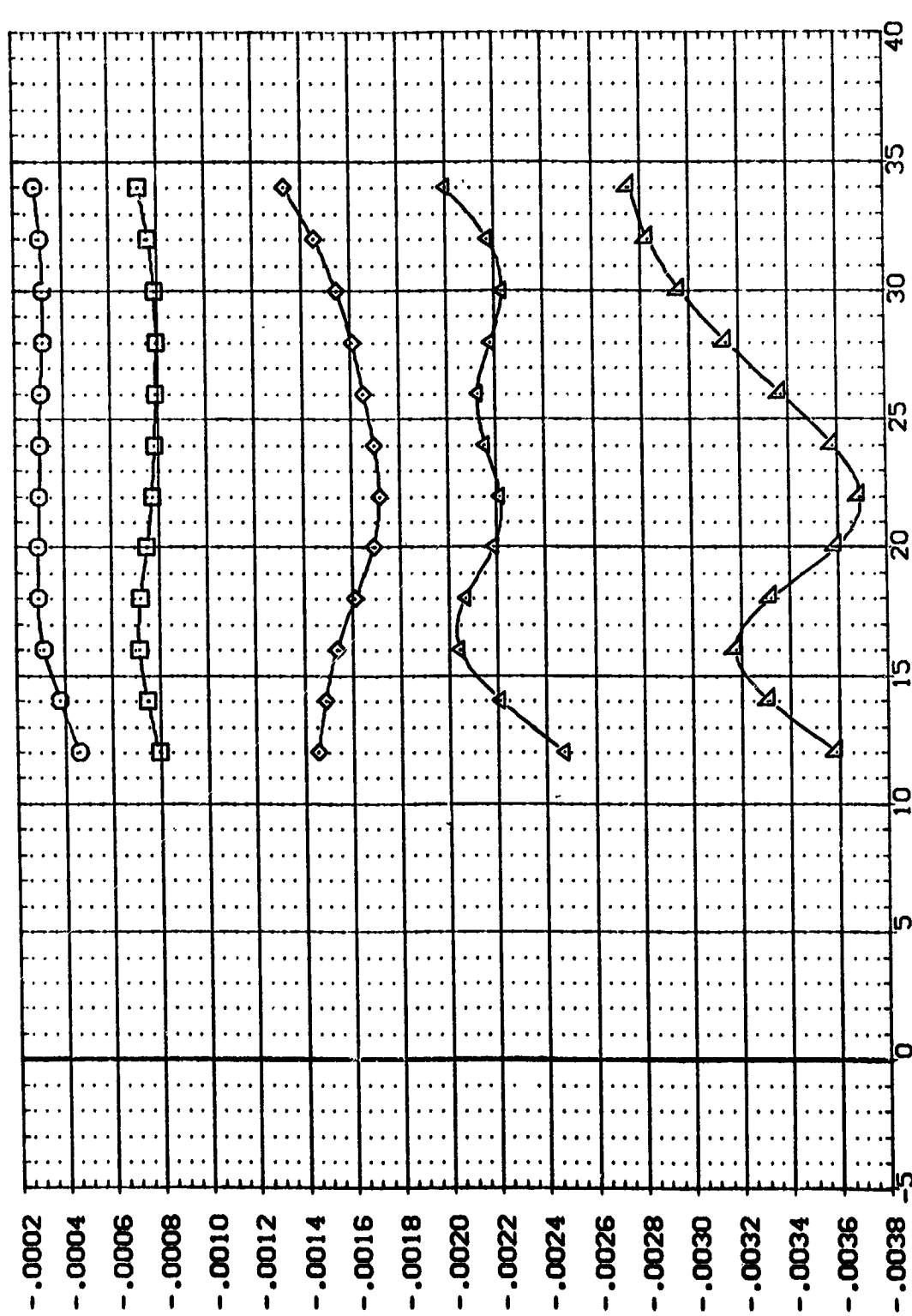
(APMDS3)    MA-7-LPVT    1031    ROCKWELL    PRR    CRB    CONE    BVTN40    .000    328.000    .000    XPRP    12.9510    INCHES

(APMDS4)    MA-7-LPVT    1031    ROCKWELL    PRR    CRB    CONE    BVTN40    .000    600.000    .000    YPRP    6.0000    INCHES

(APMDS5)    MA-7-LPVT    1031    ROCKWELL    PRR    CRB    CONE    BVTN40    .000    600.000    .000    ZPRP    6.0000    INCHES

SCALE    .0150

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS    STABILITY AXIS



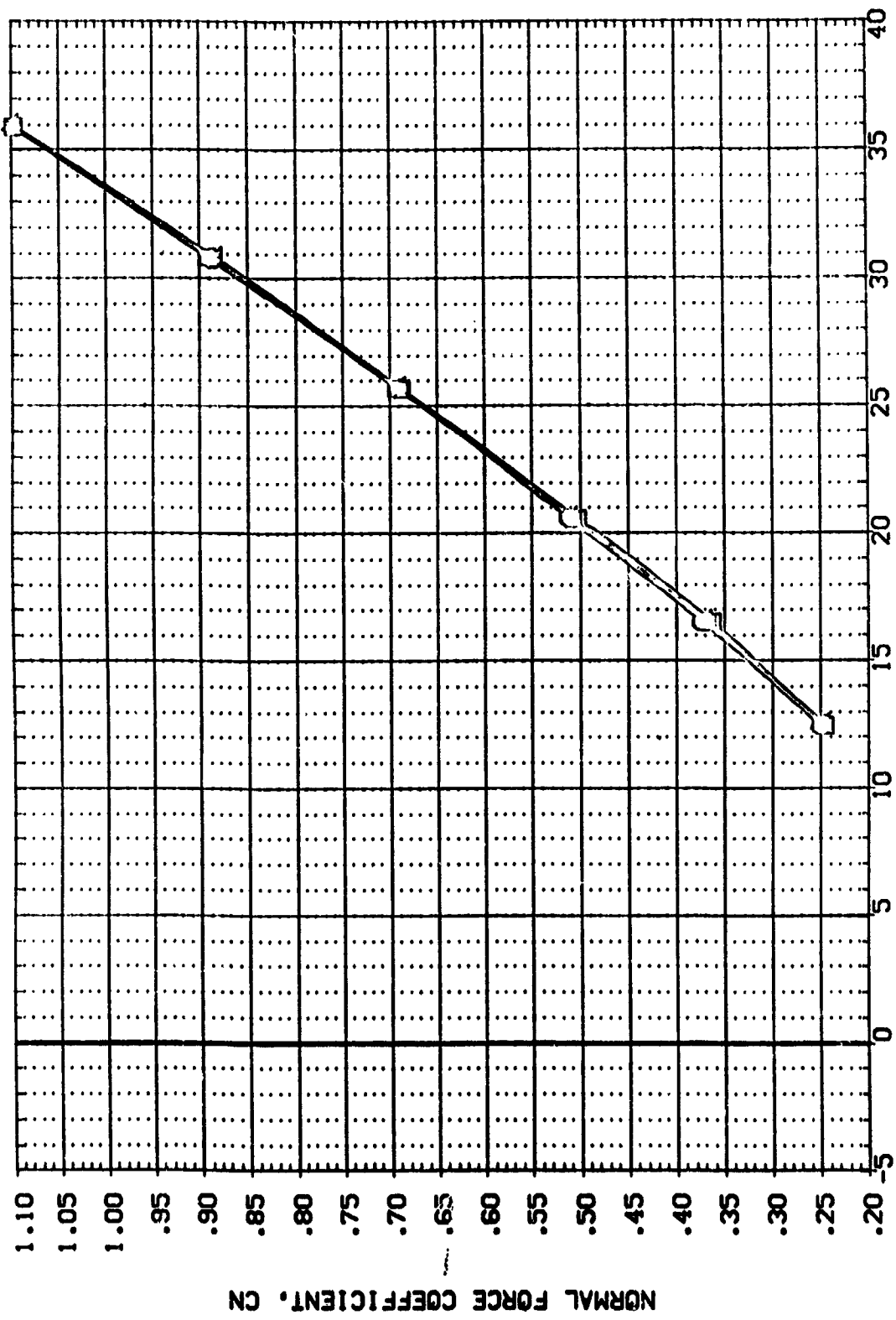
ANGLE OF ATTACK, ALPHA, DEGREES

INTERFERENCE EFFECTS OF LEFT-SIDE PITCH/ROLL JETS FIRING TOWARD WING (INCREMENTS)

(A) MACH = 4.00

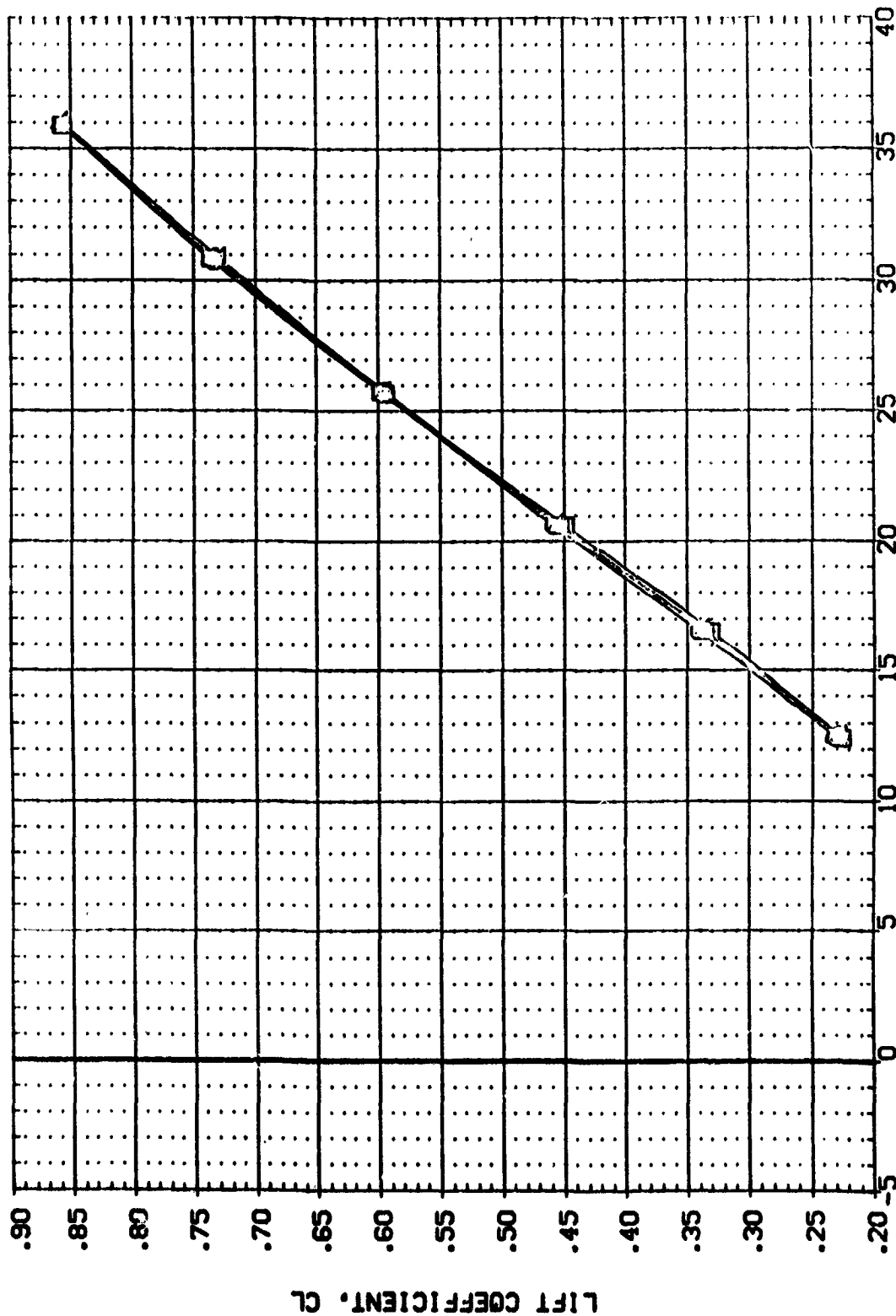
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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RV/L	REFERENCE INFORMATION
(CPM070)	MA-7.0PVT 1031.ROCKWELL PRR CR8. CONF.	.000	.000	1.000	SREF .7245 SQ.FT.
(CPM072)	MA-7.0PVT 1031.ROCKWELL PRR CR8. CONF.	.000	37.000	1.000	LREF 7.8828 INCHES
(CPM073)	MA-7.0PVT 1031.ROCKWELL PRR CR8. CONF.	.000	100.000	1.000	BREF 15.1152 INCHES
(CPM075)	MA-7.0PVT 1031.ROCKWELL PRR CR8. CONF.	.000	199.000	1.000	YREF 12.9510 INCHES
(CPM076)	MA-7.0PVT 1031.ROCKWELL PRR CR8. CONF.	.000	328.000	1.000	YREF 6.0000 INCHES
(CPM078)	MA-7.0PVT 1031.ROCKWELL PRR CR8. CONF.	.000	600.000	1.000	ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF PITCH/ROLL JETS FIRING TOWARD VERT. TAIL (RIGHT-SIDE JETS ONLY)

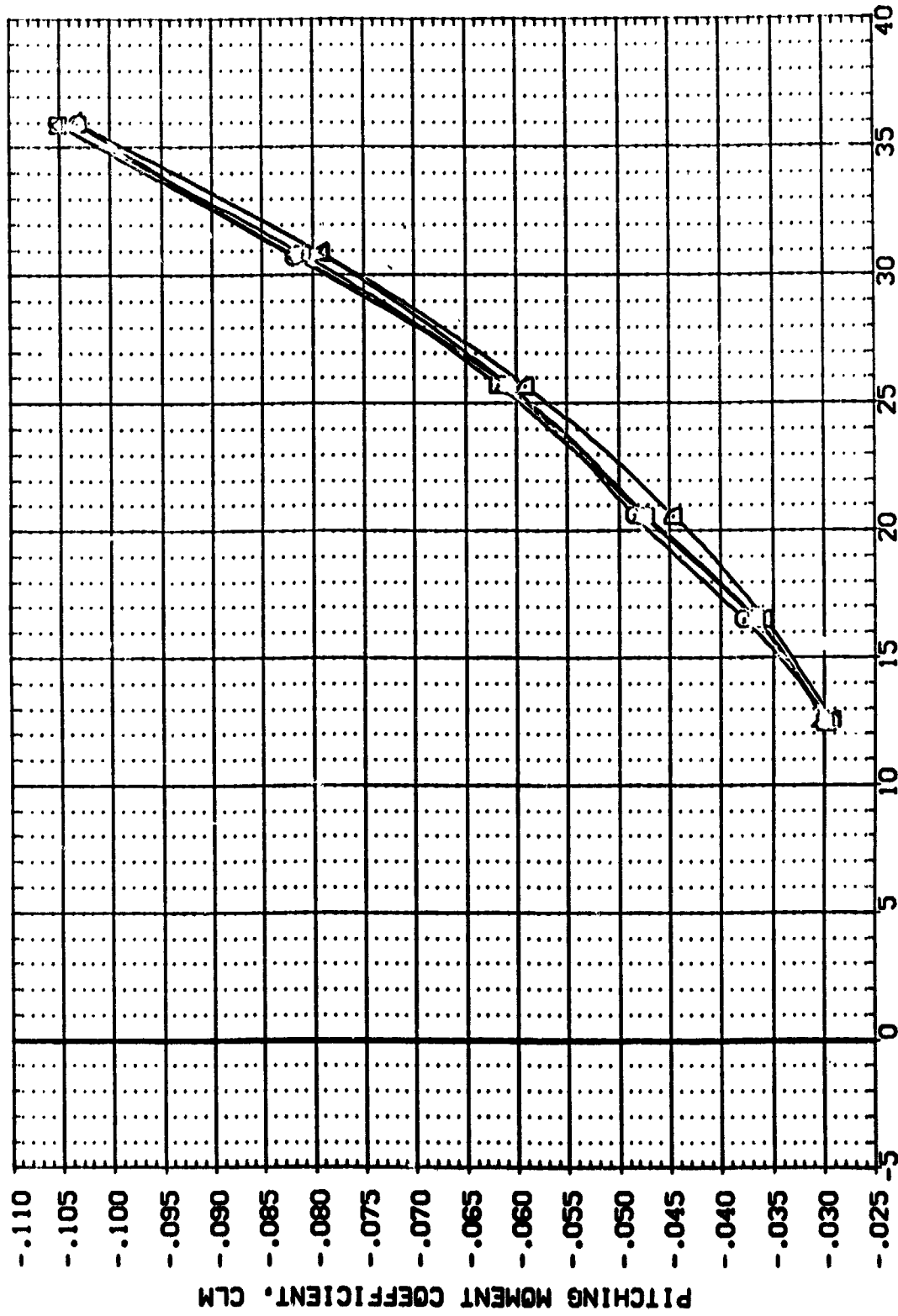
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CPH070)	MA-7, UPVT 1031, ROCKWELL	.000	.000	1.000	SREF 7245 SQ.FT.
(CPH072)	MA-7, UPVT 1031, ROCKWELL	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH073)	MA-7, UPVT 1031, ROCKWELL	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH075)	MA-7, UPVT 1031, ROCKWELL	.000	199.000	1.000	XREF 12.9513 INCHES
(CPH076)	MA-7, UPVT 1031, ROCKWELL	.000	328.000	1.000	YMRP .0000 INCHES
(CPH078)	MA-7, UPVT 1031, ROCKWELL	.000	500.000	1.000	ZMRP .0000 INCHES
					SCALE .0150



EFFECT OF PITCH/ROLL JETS FIRING TOWARD VERT. TAIL (RIGHT-SIDE JETS ONLY)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH070)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.000	.000	1.000	SREF 7245 SO.FT.
(CPH072)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.000	37.000	1.000	LREF 7.8228 INCHES
(CPH073)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH075)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.000	199.000	1.000	YMRP 12.5510 INCHES
(CPH076)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.000	328.000	1.000	ZMRP .0000 INCHES
(CPH078)	MA-7, UPVT 1031, ROCKWELL PRR CR8.	.000	600.000	1.000	SCALE 6.0000 INCHES

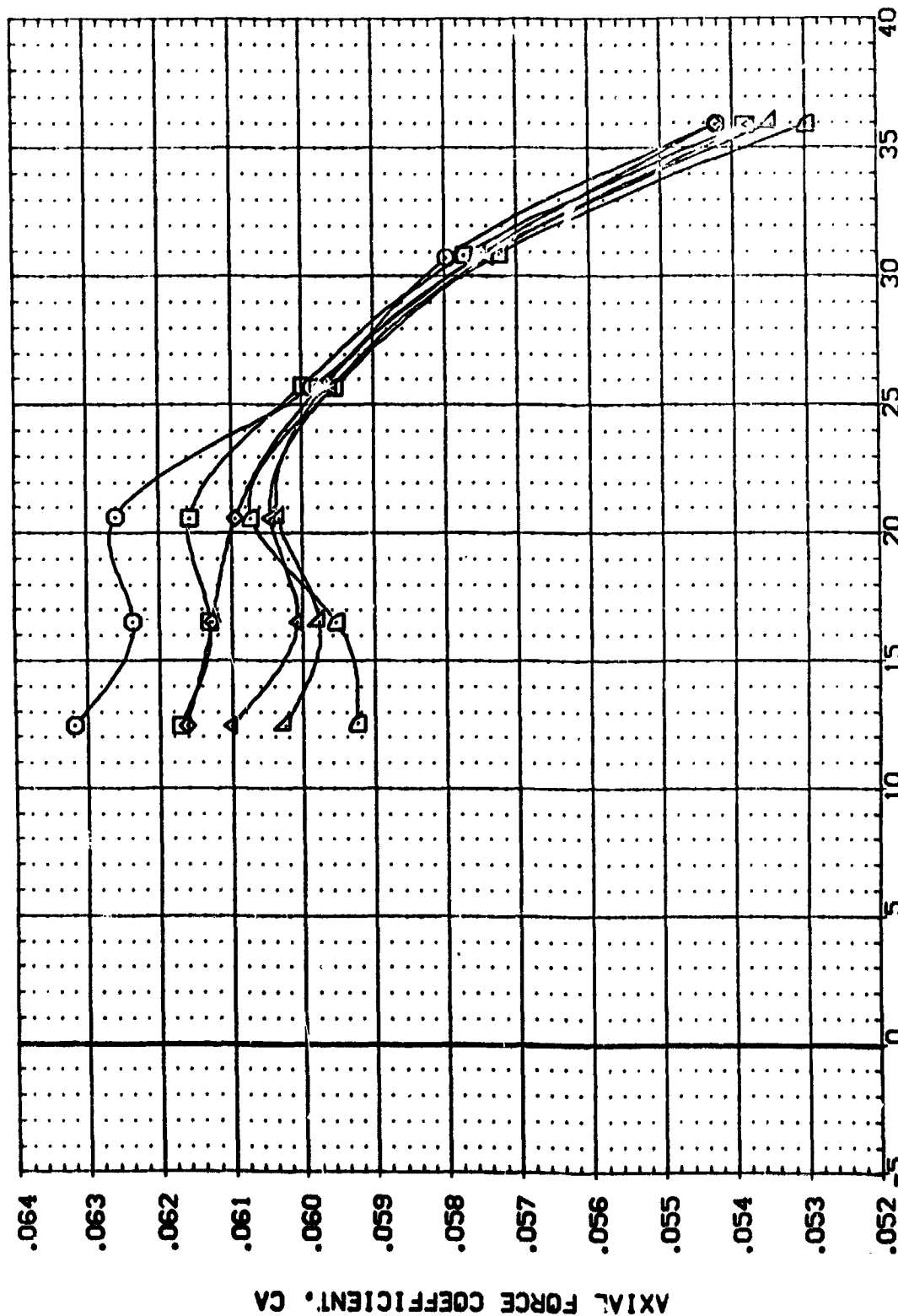


EFFECT OF PITCH/ROLL JETS FIRING TOWARD VERT. TAIL (RIGHT-SIDE JETS ONLY)

(A)MACH = 4.00

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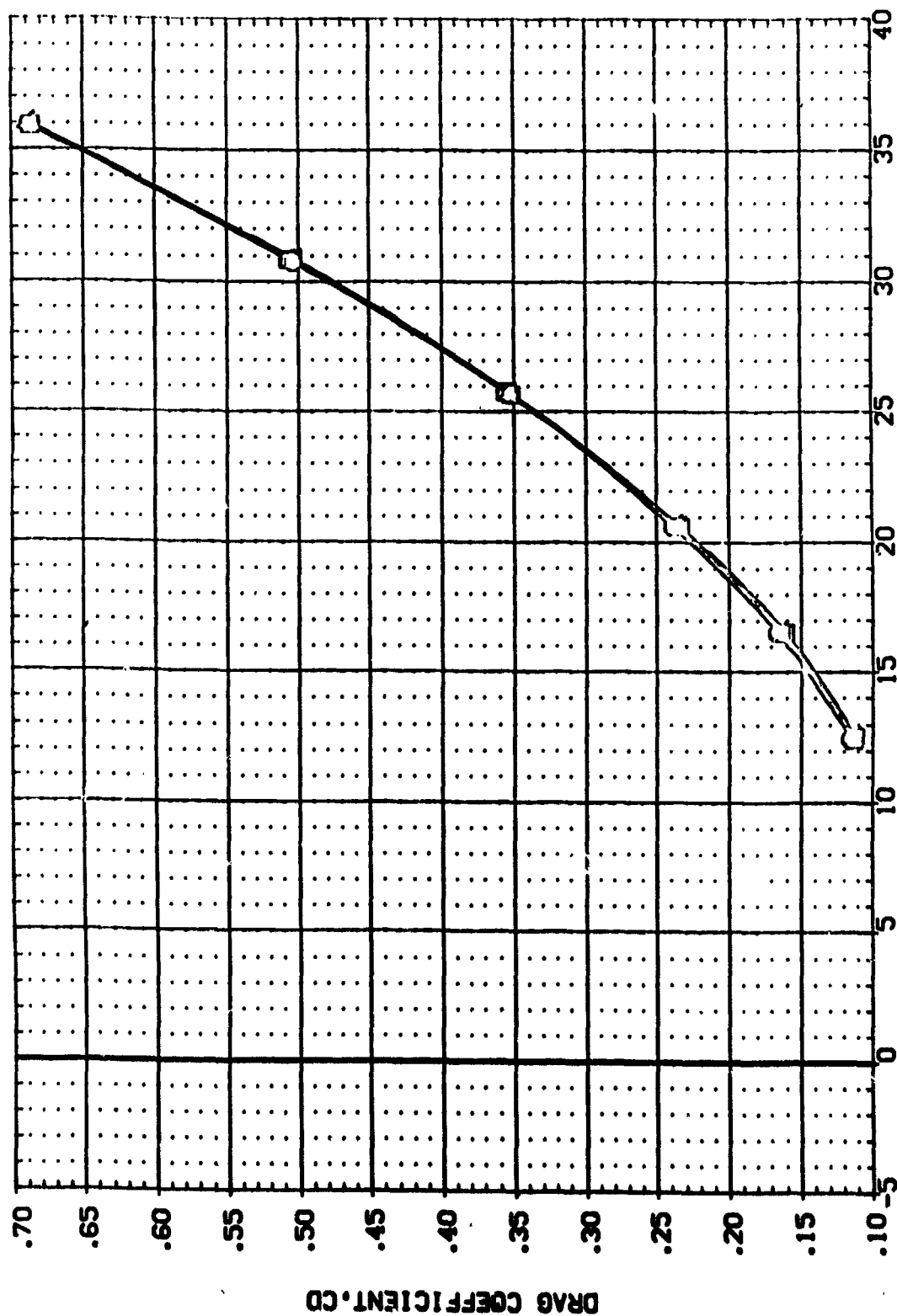
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CP-070)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF. BVTN41	.000	.000	1.000	SREF 7245 SO.FT.
(CP-072)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF. BVTN41	.000	37.000	1.000	LREF 7.8928 INCHES
(CP-073)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF. BVTN41	.000	100.000	1.000	BREF 15.1152 INCHES
(CP-075)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF. BVTN41	.000	198.000	1.000	XREF 12.9510 INCHES
(CP-076)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF. BVTN41	.000	328.000	1.000	YREF 6.0000 INCHES
(CP-078)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF. BVTN41	.000	600.000	1.000	ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF PITCH/ROLL JETS FIRING TOWARD VERT. TAIL (RIGHT-SIDE JETS ONLY)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RV/L	REFERENCE INFORMATION
(CPH070)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN41	.000	.000	1.000	SREF .7245 SQ.FT.
(CPH072)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN41	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH073)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN41	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH075)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN41	.000	199.000	1.000	YMRF 12.9510 INCHES
(CPH076)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN41	.000	328.000	1.000	ZMRF 6.0000 INCHES
(CPH078)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BVTN41	.000	600.000	1.000	SCALE .0150



EFFECT OF PITCH/ROLL JETS FIRING TOWARD VERT. TAIL (RIGHT-SIDE JETS ONLY)

(A)MACH = 4.00

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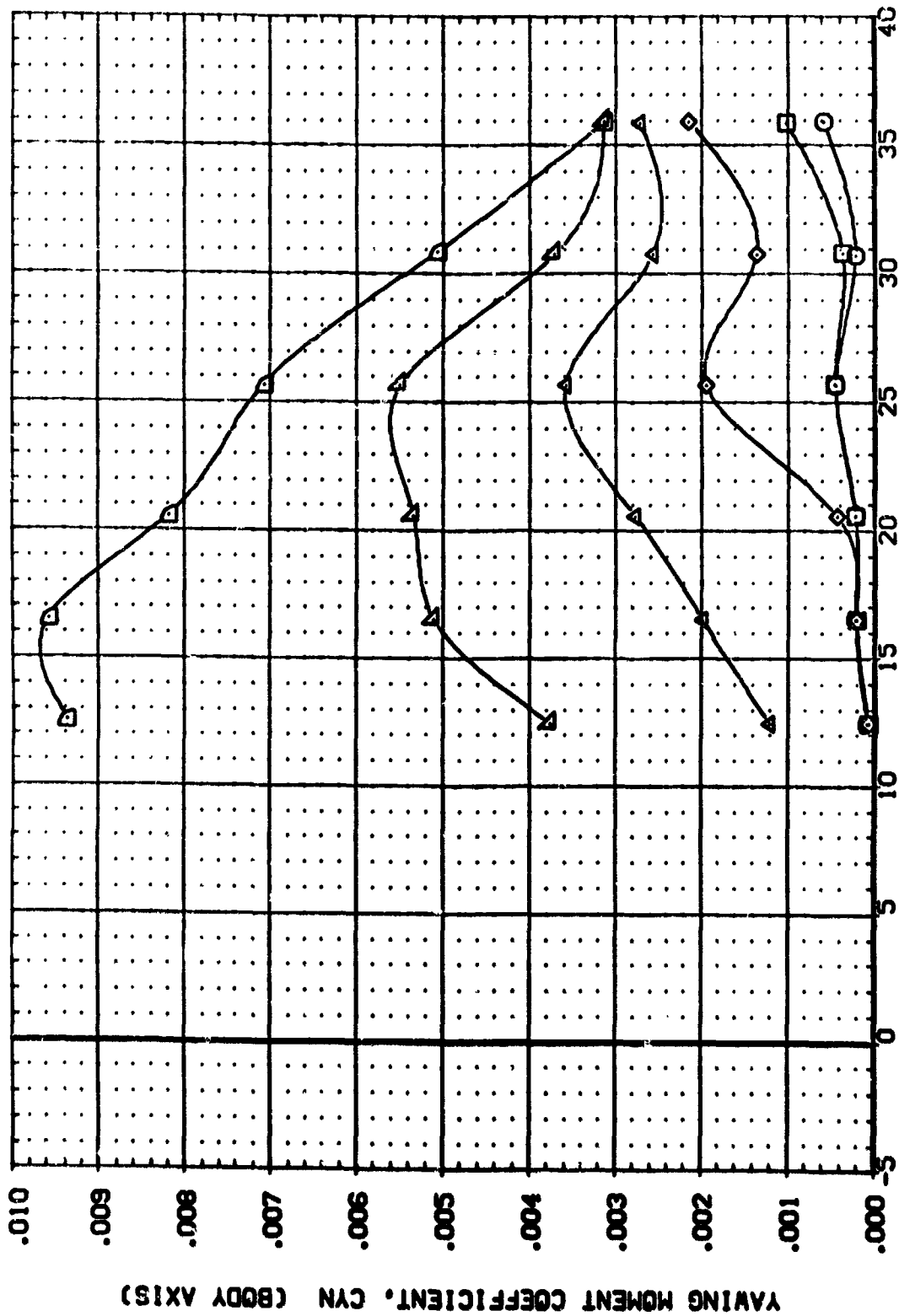
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORR	CONF	BVTN41	BETA	PO-JET	RNVL	REFERENCE INFORMATION
(CP-070)	MA-7,UPVT 1031,ROCKWELL PRR	ORR	CONF	BVTN41	.000	.000	1.000	SREF .7245 SQ.FT.
(CP-071)	MA-7,UPVT 1031,ROCKWELL PRR	ORR	CONF	BVTN41	.000	37.000	1.000	LREF 7.8923 INCHES
(CP-072)	MA-7,UPVT 1031,ROCKWELL PRR	ORR	CONF	BVTN41	.000	100.000	1.000	BREF 15.1152 INCHES
(CP-073)	MA-7,UPVT 1031,ROCKWELL PRR	ORR	CONF	BVTN41	.000	159.000	1.000	XM-2P 12.9510 INCHES
(CP-074)	MA-7,UPVT 1031,ROCKWELL PRR	ORR	CONF	BVTN41	.000	328.000	1.000	VM-2P .0000 INCHES
(CP-075)	MA-7,UPVT 1031,ROCKWELL PRR	ORR	CONF	BVTN41	.000	600.000	1.000	ZM-2P .0000 INCHES
(CP-076)	MA-7,UPVT 1031,ROCKWELL PRR	ORR	CONF	BVTN41	.000	600.000	1.000	SCALE .0150



EFFECT OF PITCH/ROLL JETS FIRING TOWARD VERT. TAIL (RIGHT-SIDE JETS ONLY)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RVL	REFERENCE INFORMATION
(CP070)	MA-7,UPVT 1031,ROCKWELL PRR DR8	.000	.000	1.000	SREF 7245 SO.FT.
(CP071)	MA-7,UPVT 1031,ROCKWELL PRR DR8	.000	37.000	1.000	LBFF 7.6328 INCHES
(CP072)	MA-7,UPVT 1031,ROCKWELL PRR DR8	.000	100.000	1.000	BBFF 15.1152 INCHES
(CP073)	MA-7,UPVT 1031,ROCKWELL PRR DR8	.000	199.000	1.000	XT-3 12.9510 INCHES
(CP074)	MA-7,UPVT 1031,ROCKWELL PRR DR8	.000	328.000	1.000	Y-30 .0000 INCHES
(CP075)	MA-7,UPVT 1031,ROCKWELL PRR DR8	.000	600.000	1.000	Z-30 .0150 INCHES
(CP076)	MA-7,UPVT 1031,ROCKWELL PRR DR8	.000			SCALE



EFFECT OF PITCH/ROLL JETS FIRING TOWARD VERT. TAIL (RIGHT-SIDE JETS ONLY)



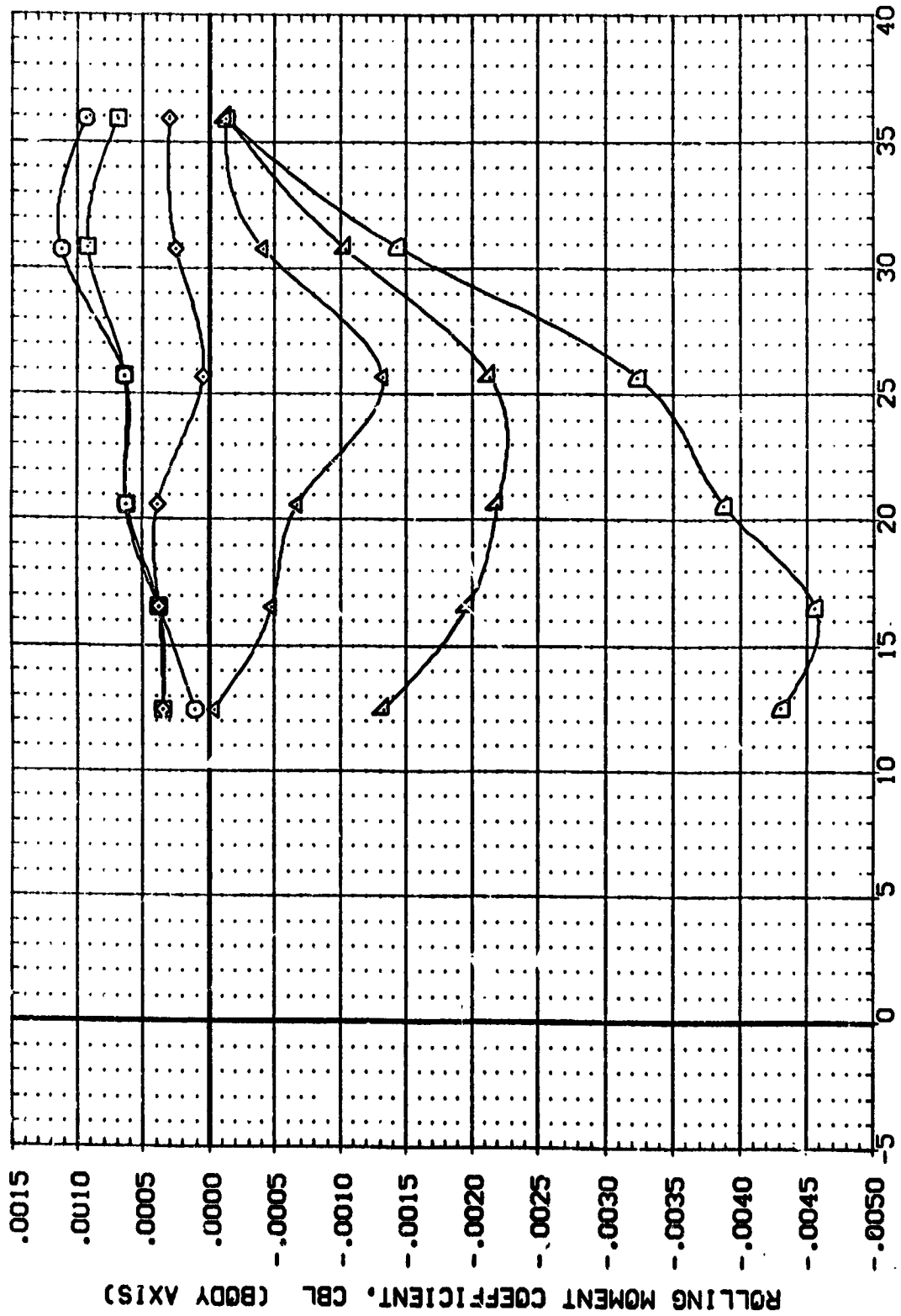
DATA SET SYMB.	CONFIGURATION DESCRIPTION	BETA	PG-JET	RN/L	REFERENCE INFORMATION
(CPH070)	MA-7.1PVT 1031.ROCKWELL PRR ORB. CONF. BVTN41	.000	.00	1.000	SREF 7245 SQ.FT.
(CPH072)	MA-7.1PVT 1031.ROCKWELL PRR ORB. CONF. BVTN41	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH073)	MA-7.1PVT 1031.ROCKWELL PRR ORB. CONF. BVTN41	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH075)	MA-7.1PVT 1031.ROCKWELL PRR ORB. CONF. BVTN41	.000	199.000	1.000	XREF 12.9510 INCHES
(CPH076)	MA-7.1PVT 1031.ROCKWELL PRR ORB. CONF. BVTN41	.000	328.000	1.000	YREF .0000 INCHES
(CPH078)	MA-7.1PVT 1031.ROCKWELL PRR ORB. CONF. BVTN41	.000	600.000	1.000	ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF PITCH/ROLL JETS FIRING TOWARD VERT. TAIL (RIGHT-SIDE JETS ONLY)

(MACH = 4.00)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPM070)	MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF.	.000	.000	1.000	SREF 7.7245 SO.FT.
(CPM072)	MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF.	.000	37.000	1.000	LREF 7.8828 INCHES
(CPM073)	MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF.	.000	100.000	1.000	BREF 15.1152 INCHES
(CPM075)	MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF.	.000	199.000	1.000	XPRP 12.9510 INCHES
(CPM076)	MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF.	.000	328.000	1.000	YPRP .0000 INCHES
(CPM078)	MA-7-UPVT 1031-ROCKVELL PRR ORB. CONF.	.000	600.000	1.000	ZPRP 6.0000 INCHES
					SCALE .0150



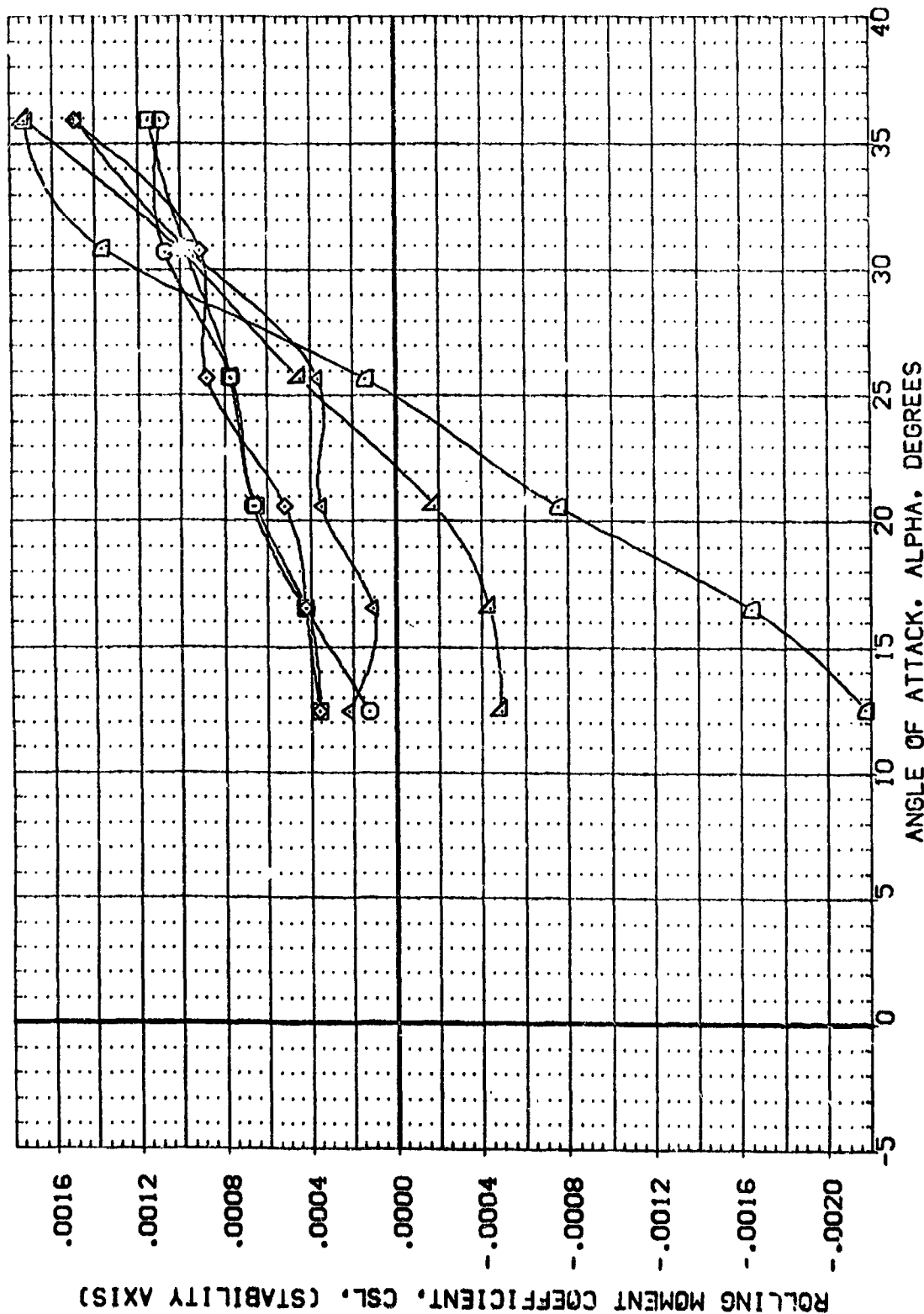
EFFECT OF PITCH/ROLL JETS FIRING TOWARD VERT. TAIL (RIGHT-SIDE JETS ONLY)

(A)MACH = 4.00

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DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA PG-JET RV/L REFERENCE INFORMATION

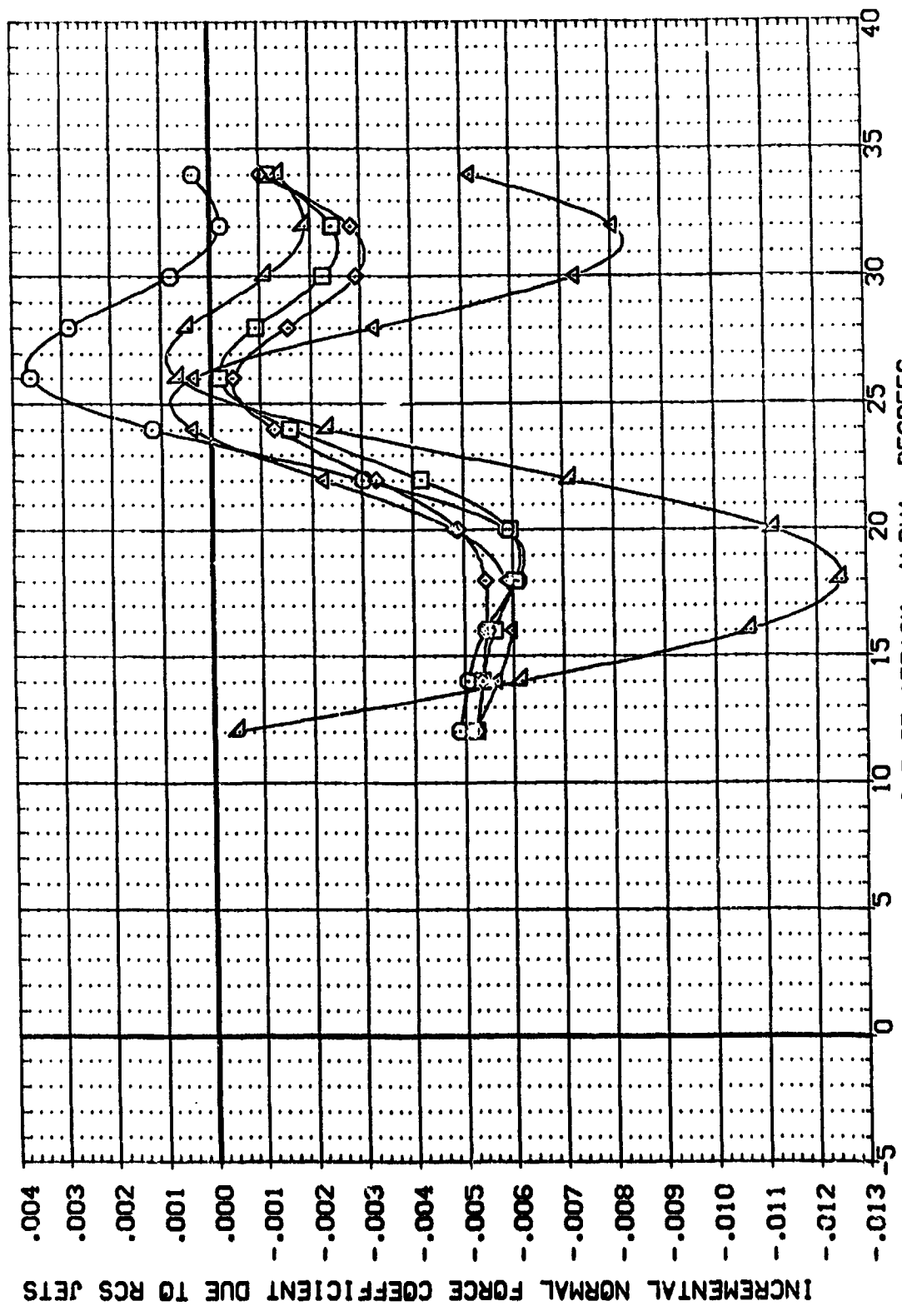
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RV/L	REFERENCE INFORMATION
(CP070)	MA-7, UPVT 1031, ROCKVELL PRR CRB, CONF.	.000	.000	1.000	SREF 7.245 SQ. FT.
(CP072)	MA-7, UPVT 1031, ROCKVELL PRR CRB, CONF.	.000	37.000	1.000	LREF 7.8828 INCHES
(CP073)	MA-7, UPVT 1031, ROCKVELL PRR CRB, CONF.	.000	100.000	1.000	BREF 15.1152 INCHES
(CP075)	MA-7, UPVT 1031, ROCKVELL PRR CRB, CONF.	.000	199.000	1.000	XMRP 12.9510 INCHES
(CP076)	MA-7, UPVT 1031, ROCKVELL PRR CRB, CONF.	.000	328.000	1.000	YMRP .0000 INCHES
(CP078)	MA-7, UPVT 1031, ROCKVELL PRR CRB, CONF.	.000	503.000	1.000	ZMRP 6.0000 INCHES
					SCALE .0150



EFFECT OF PITCH/ROLL JETS FIRING TOWARD VERT. TAIL (RIGHT-SIDE JETS ONLY)

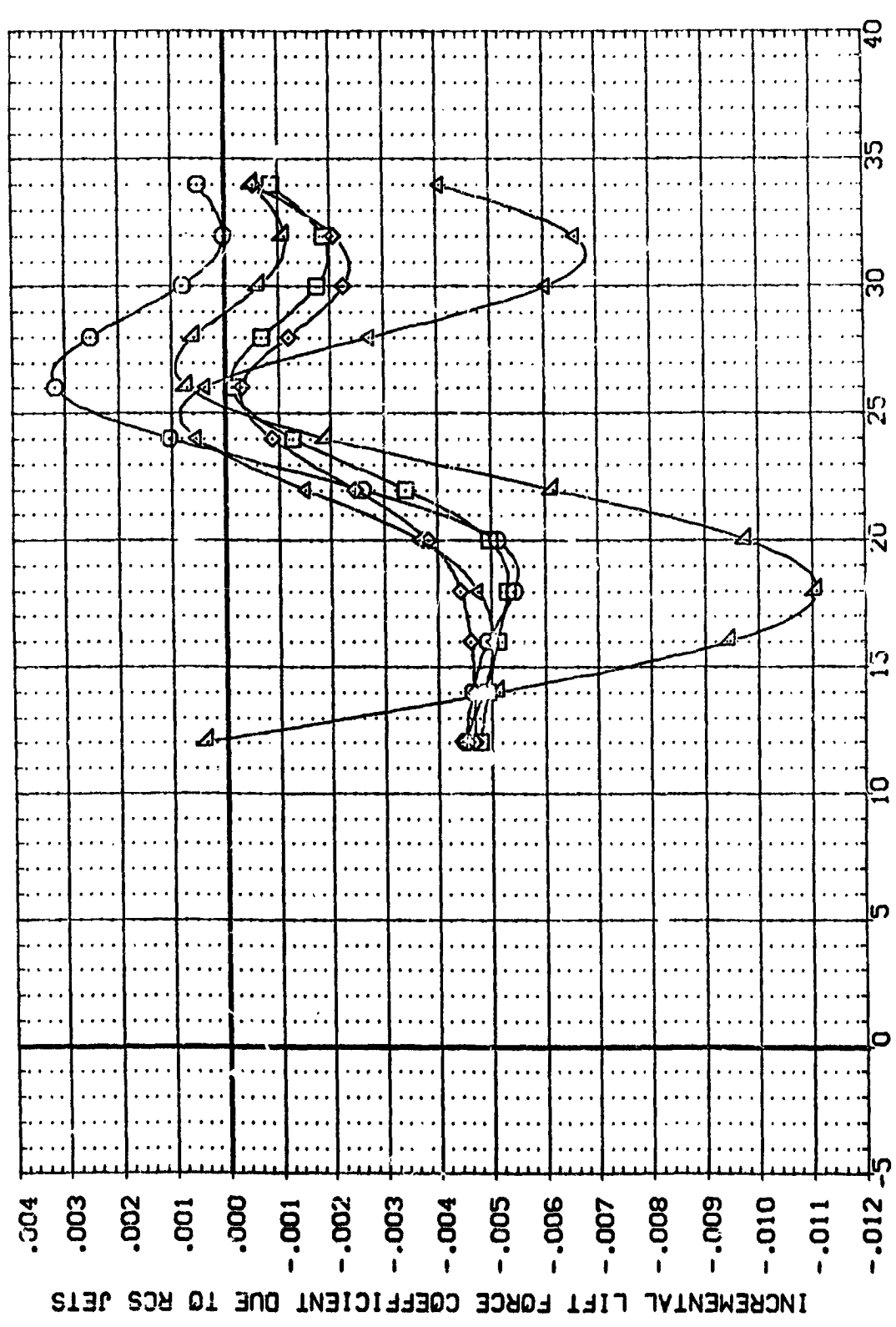
(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(APMD72)	MA-7, LPVT 1031, ROCKWELL PRR CR8, CONF: BVTN4	.000	37.000	1.000	SREF 7245 50.17
(APMD73)	MA-7, LPVT 1031, ROCKWELL PRR CR8, CONF: BVTN4	.000	100.000	1.000	LREF 7.8278 INCHES
(APMD75)	MA-7, LPVT 1031, ROCKWELL PRR CR8, CONF: BVTN4	.000	199.000	1.000	BREF 15.1152 INCHES
(APMD76)	MA-7, LPVT 1031, ROCKWELL PRR CR8, CONF: BVTN4	.000	323.000	1.000	XREF 12.9610 INCHES
(APMD78)	MA-7, LPVT 1031, ROCKWELL PRR CR8, CONF: BVTN4	.000	600.000	1.000	YREF 6.0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0130



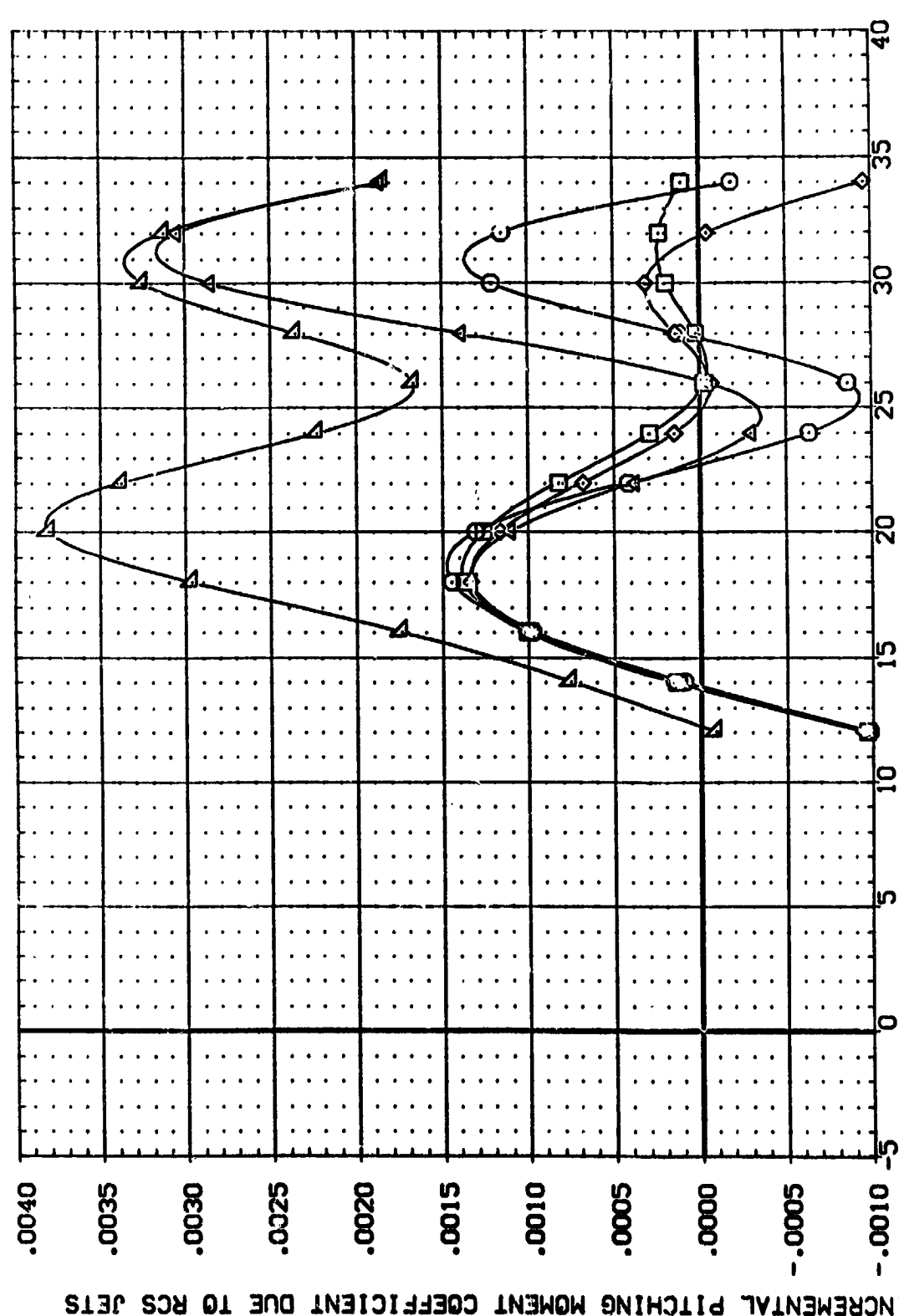
INTERFERENCE EFFECTS OF RIGHT-SIDE PITCH/ROLL JETS FIRING TOWARD VERT. TAIL  
 (A) MACH = 4.00  
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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVL	REFERENCE INFORMATION
(APM072)	MA-7. UPVT 1031. ROCKVELL PRR CR8. CONF.	.000	37.000	1.000	SREF 7245 SO. FT.
(APM073)	MA-7. UPVT 1031. ROCKVELL PRR CR8. CONF.	.000	100.000	1.000	LREF 7.8828 INCHES
(APM075)	MA-7. UPVT 1031. ROCKVELL PRR CR8. CONF.	.000	199.000	1.000	BREF 15.1152 INCHES
(APM076)	MA-7. UPVT 1031. ROCKVELL PRR CR8. CONF.	.000	328.000	1.000	XREF 12.9510 INCHES
(APM078)	MA-7. UPVT 1031. ROCKVELL PRR CR8. CONF.	.000	600.000	1.000	YREF 6.0000 INCHES
					ZREF .0150 INCHES
					SCALE



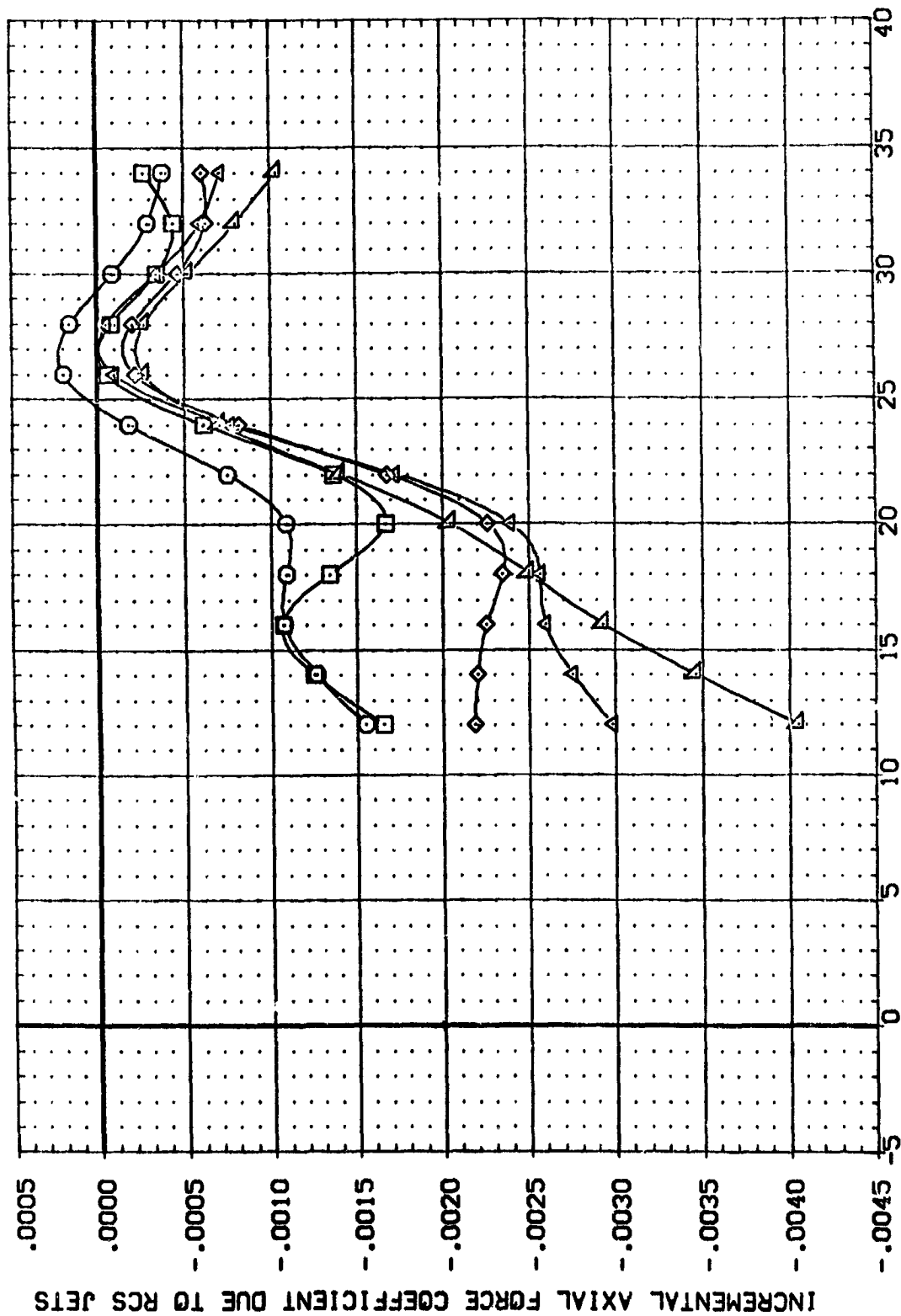
INTERFERENCE EFFECTS OF RIGHT-SIDE PITCH/ROLL JETS FIRING TOWARD VERT. TAIL  
 (A)MACH = 4.00  
 PAGE 242

DATA SET SYMB.	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(APMD72)	MA-7:UPVT 1031:ROCKWELL PRR CRB. CONF.	.000	37.000	1.000	SREF .7245 SQ. FT.
(APMD73)	MA-7:UPVT 1031:ROCKWELL PRR CRB. CONF.	.000	100.000	1.000	LREF 7.8828 INCHES
(APMD75)	MA-7:UPVT 1031:ROCKWELL PRR CRB. CONF.	.000	199.000	1.000	BREF 15.1152 INCHES
(APMD76)	MA-7:UPVT 1031:ROCKWELL PRR CRB. CONF.	.000	328.000	1.000	XPRP 12.5510 INCHES
(APMD78)	MA-7:UPVT 1031:ROCKWELL PRR CRB. CONF.	.000	600.000	1.000	YPRP .0000 INCHES
					ZPRP .0150 INCHES
					SCALE



INTERFERENCE EFFECTS OF RIGHT-SIDE PITCH/ROLL JETS FIRING TOWARD VERT. TAIL

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVL	REFERENCE INFORMATION
(APM072)	MA-7-UPVT 1031-ROCKVELL PRR CRB. CONF.	.000	37.000	1.000	SREF 7245 SQ.FT.
(APM073)	MA-7-UPVT 1031-ROCKVELL PRR CRB. CONF.	.000	100.000	1.000	LREF 7.8828 INCHES
(APM075)	MA-7-UPVT 1031-ROCKVELL PRR CRB. CONF.	.000	199.000	1.000	BREF 15.1152 INCHES
(APM076)	MA-7-UPVT 1031-ROCKVELL PRR CRB. CONF.	.000	328.000	1.000	XMRP 12.9510 INCHES
(APM078)	MA-7-UPVT 1031-ROCKVELL PRR CRB. CONF.	.000	600.000	1.000	YMRP .0000 INCHES
					ZMRP .0150 INCHES
					SCALE

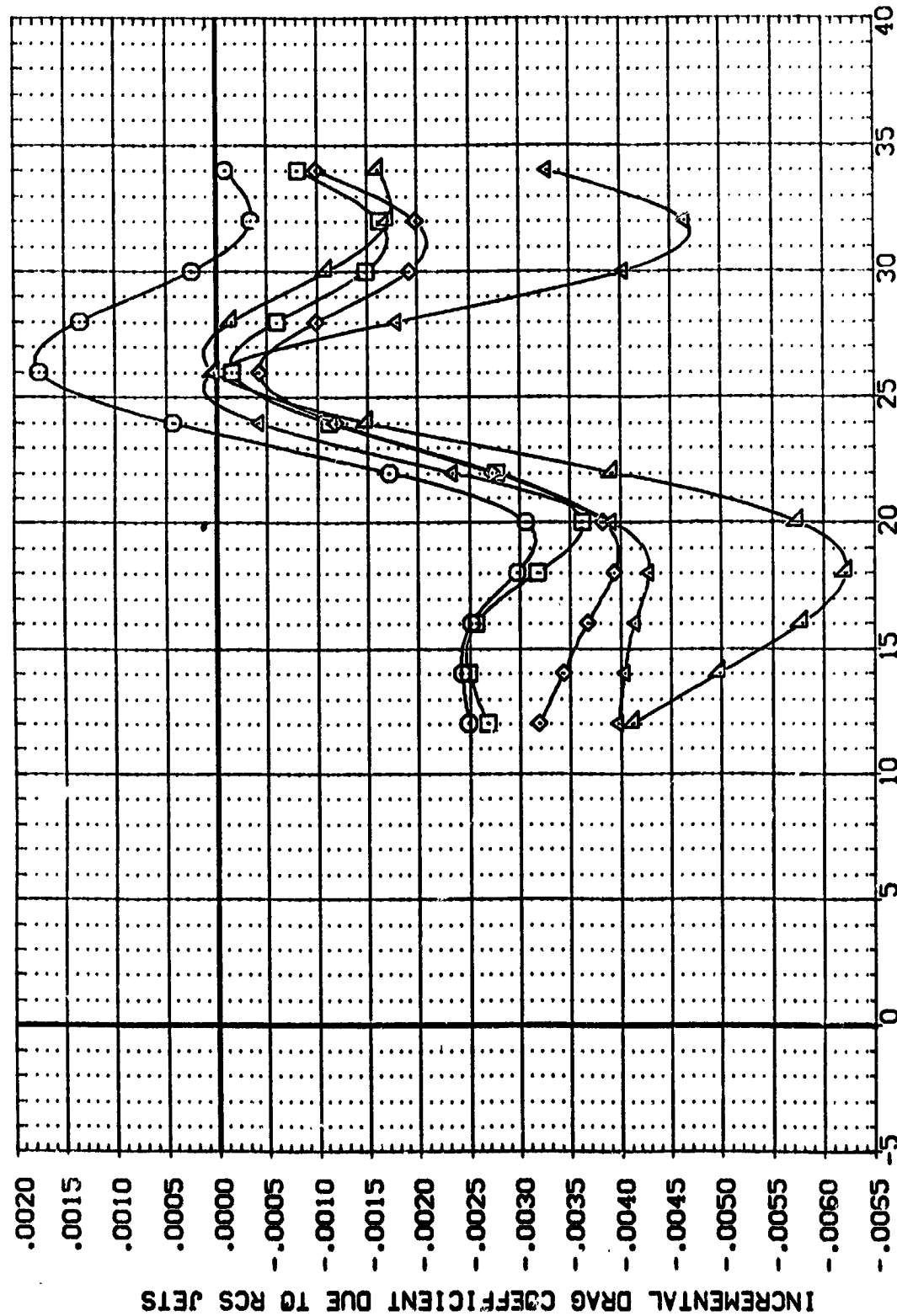


INTERFERENCE EFFECTS OF RIGHT-SIDE PITCH/ROLL JETS FIRING TOWARD VERT. TAIL

(A)MACH = 4.00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(AP072)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF. BVTN41	.000	37.000	1.000	SREF .7245 SO.FT.
(AP073)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF. BVTN41	.000	100.000	1.000	LREF 7.8828 INCHES
(AP075)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF. BVTN41	.000	199.000	1.000	BREF 15.1152 INCHES
(AP076)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF. BVTN41	.000	328.000	1.000	XREF 12.9510 INCHES
(AP078)	MA-7, UPVT 1031, ROCKWELL PRR CRB, CONF. BVTN41	.000	600.000	1.000	YREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150

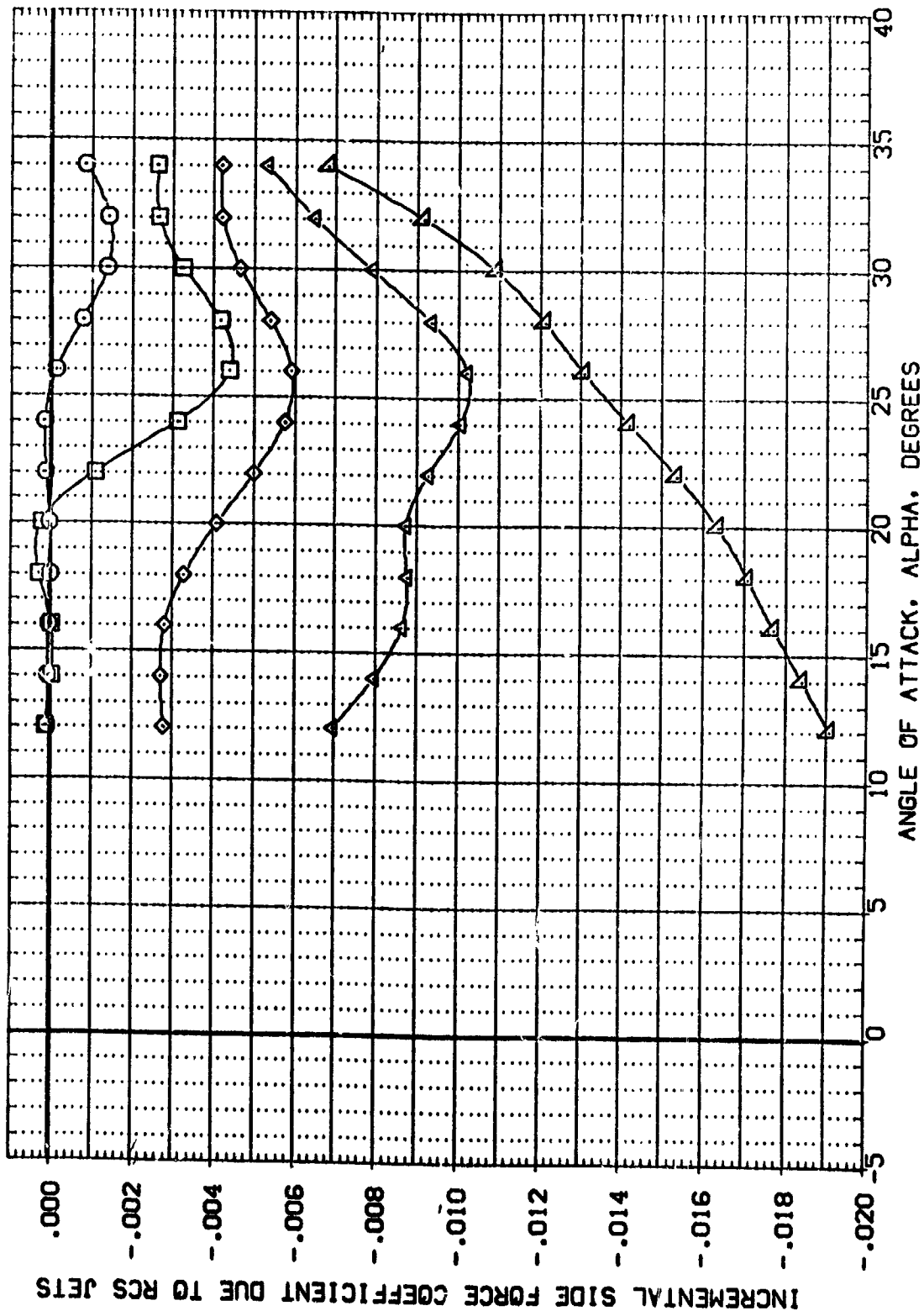


INTERFERENCE EFFECTS OF RIGHT-SIDE PITCH/ROLL JETS FIRING TOWARD VERT. TAIL

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-2	RVL	REFERENCE INFORMATION
(APM072)	MA-7. UPVT 1031. ROCKVELL PRR CR8. CONF.	.000	37.000	1.000	SREF .7345 SQ. FT.
(APM073)	MA-7. UPVT 1031. ROCKVELL PRR CR8. CONF.	.000	100.000	1.000	LREF 7.8828 INCHES
(APM075)	MA-7. UPVT 1031. ROCKVELL PRR CR8. CONF.	.000	199.000	1.000	BREF 15.1152 INCHES
(APM076)	MA-7. UPVT 1031. ROCKVELL PRR CR8. CONF.	.000	328.000	1.000	YMRP 12.9510 INCHES
(APM078)	MA-7. UPVT 1031. ROCKVELL PRR CR8. CONF.	.000	600.000	1.000	ZMRP 6.0000 INCHES
					SCALE .0150



INTERFERENCE EFFECTS OF RIGHT-SIDE PITCH/ROLL JETS FIRING TOWARD VERT. TAIL

REFERENCE INFORMATION

SREF	7245	30. FT.
LREF	7.8828	112.45
BREF	15.1152	112.45
YMRP	12.9510	112.45
ZMRP	6.0000	112.45
SCALE	0.0150	

BETA DLPB-J RV/L

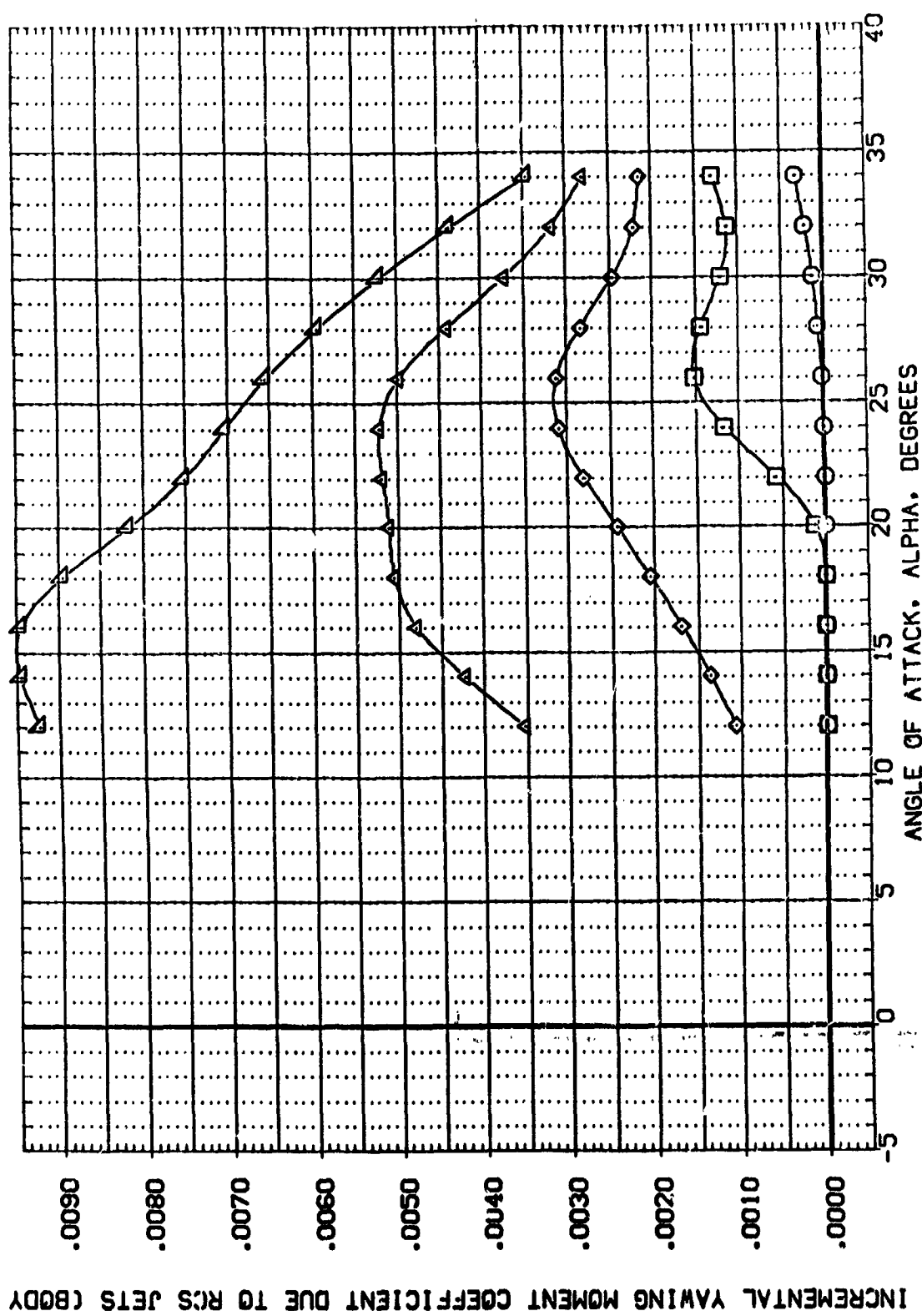
BETA	0.00	37.000	1.000
DLPB-J	0.00	100.000	1.000
RV/L	0.00	198.000	1.000
	0.00	328.000	1.000
	0.00	600.000	1.000

CONF. BVTN41

CONF.	BVTN41
CONF.	BVTN41
CONF.	BVTN41
CONF.	BVTN41
CONF.	BVTN41

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(APM072)	MA-7-UPVT	1031-ROCKWELL	PRR	0RB
(APM073)	MA-7-UPVT	1031-ROCKWELL	PRR	0RB
(APM075)	MA-7-UPVT	1031-ROCKWELL	PRR	0RB
(APM076)	MA-7-UPVT	1031-ROCKWELL	PRR	0RB
(APM078)	MA-7-UPVT	1031-ROCKWELL	PRR	0RB



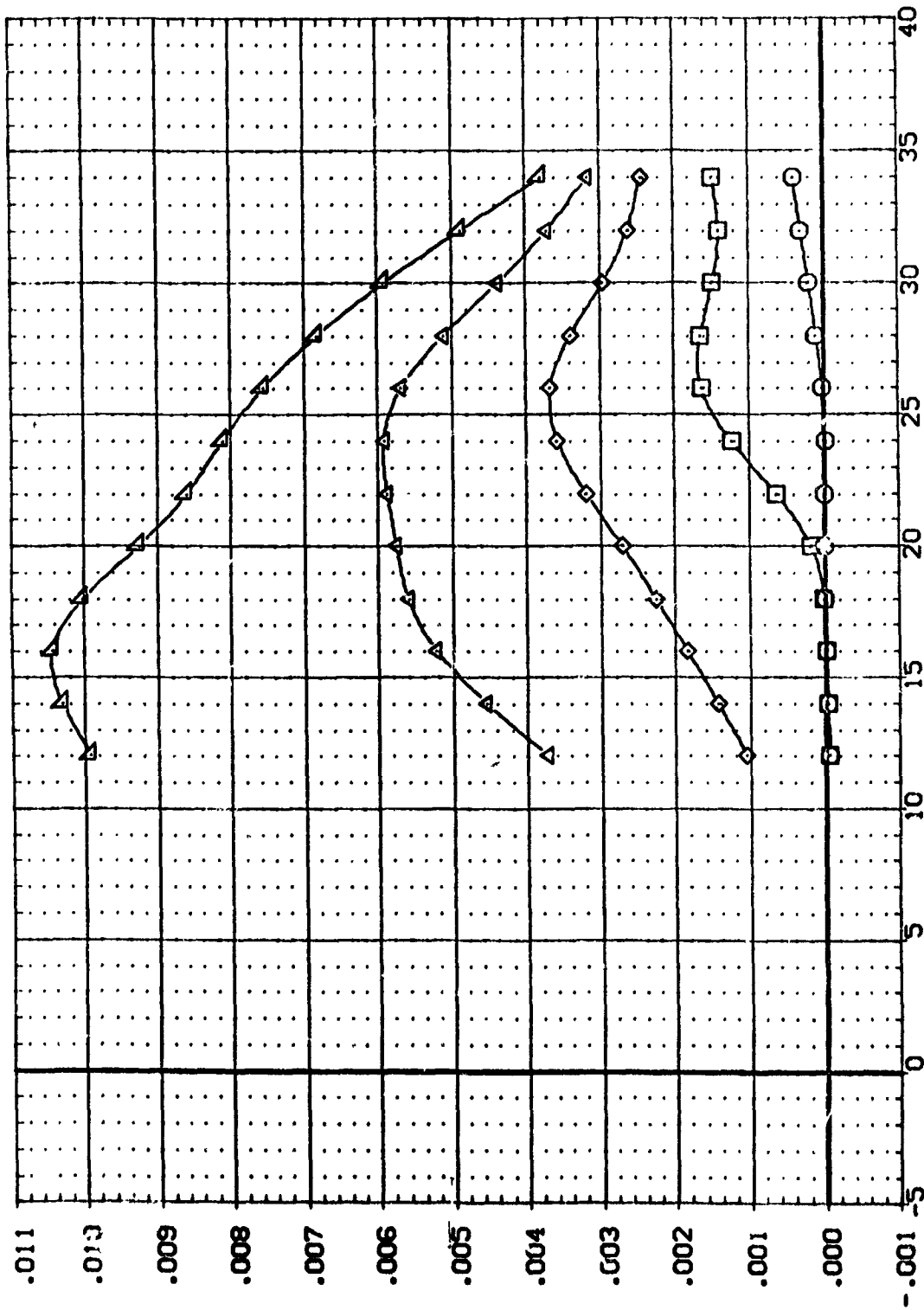
INTERFERENCE EFFECTS OF RIGHT-SIDE PITCH/ROLL JETS FIRING TOWARD VERT. TAIL

(A)MACH = 4.00

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	SREF	50 FT. INCHES
(AP072)	MA-7, UPVT 1031, ROCKVELL PRR CR8, COVF, BVTH41	.000	37.000	1.000	7.7245	7.7245
(AP073)	MA-7, UPVT 1031, ROCKVELL PRR CR8, COVF, BVTH41	.000	100.000	1.000	7.6828	7.6828
(AP075)	MA-7, UPVT 1031, ROCKVELL PRR CR8, COVF, BVTH41	.000	199.000	1.000	5.1152	5.1152
(AP076)	MA-7, UPVT 1031, ROCKVELL PRR CR8, COVF, BVTH41	.000	328.000	1.000	12.9510	12.9510
(AP078)	MA-7, UPVT 1031, ROCKVELL PRR CR8, COVF, BVTH41	.000	600.000	1.000	6.0000	6.0000

SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

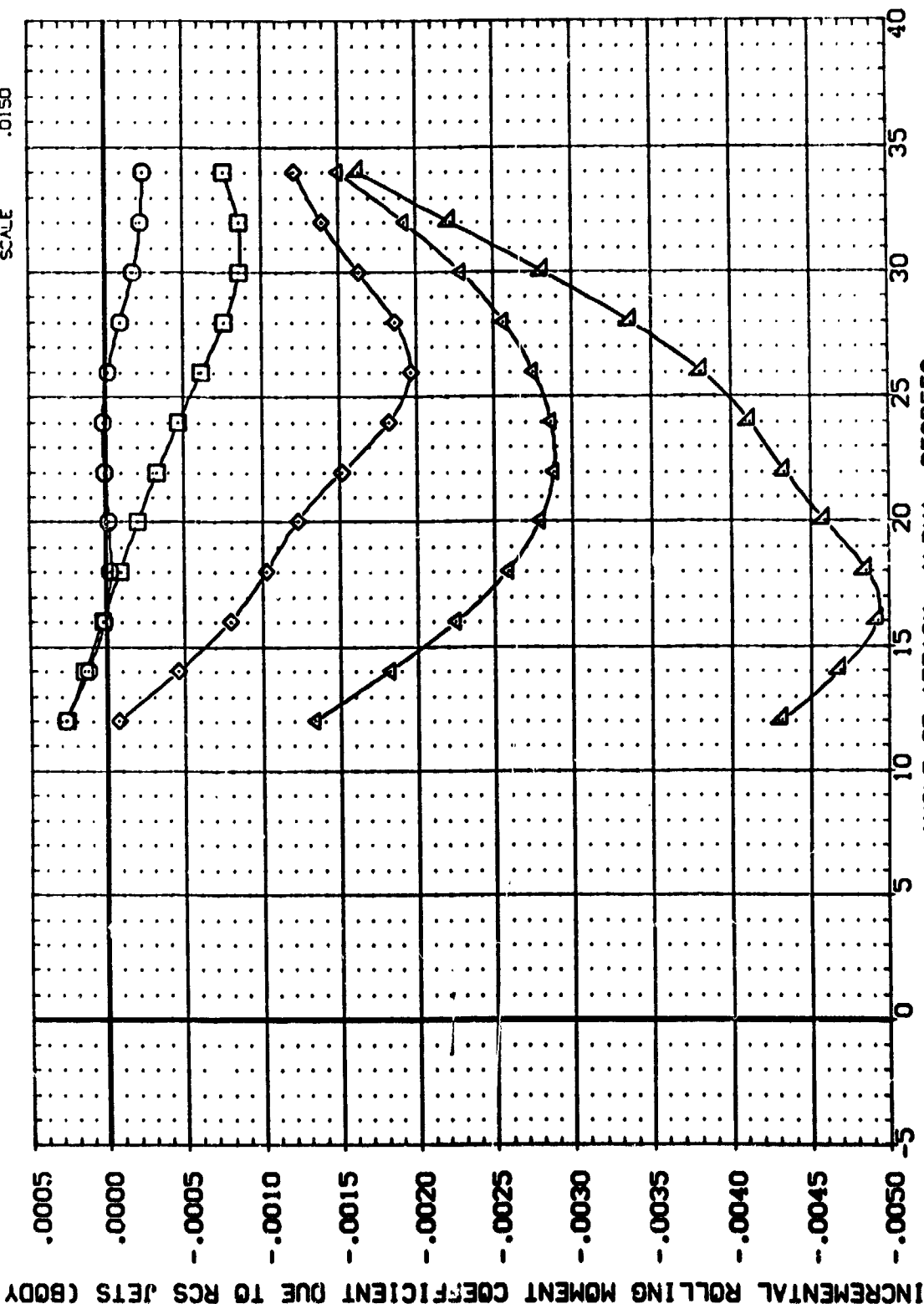
INTERFERENCE EFFECTS OF RIGHT-SIDE PITCH/ROLL JETS FIRING TOWARD VERT. TAIL

(A)MACH = 4.00

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DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RV/L	REFERENCE INFORMATION
(AP-072)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	37.000	1.000	SREF .7245 SO.FT.
(AP-073)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	100.000	1.000	LREF 7.8828 INCHES
(AP-075)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	199.000	1.000	BREF 15.1152 INCHES
(AP-076)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	328.000	1.000	YREF 12.9510 INCHES
(AP-078)	MA-7, UPVT 1031, ROCKWELL PRR CRB	.000	600.000	1.000	ZREF 6.0000 INCHES
					SCALE .0150



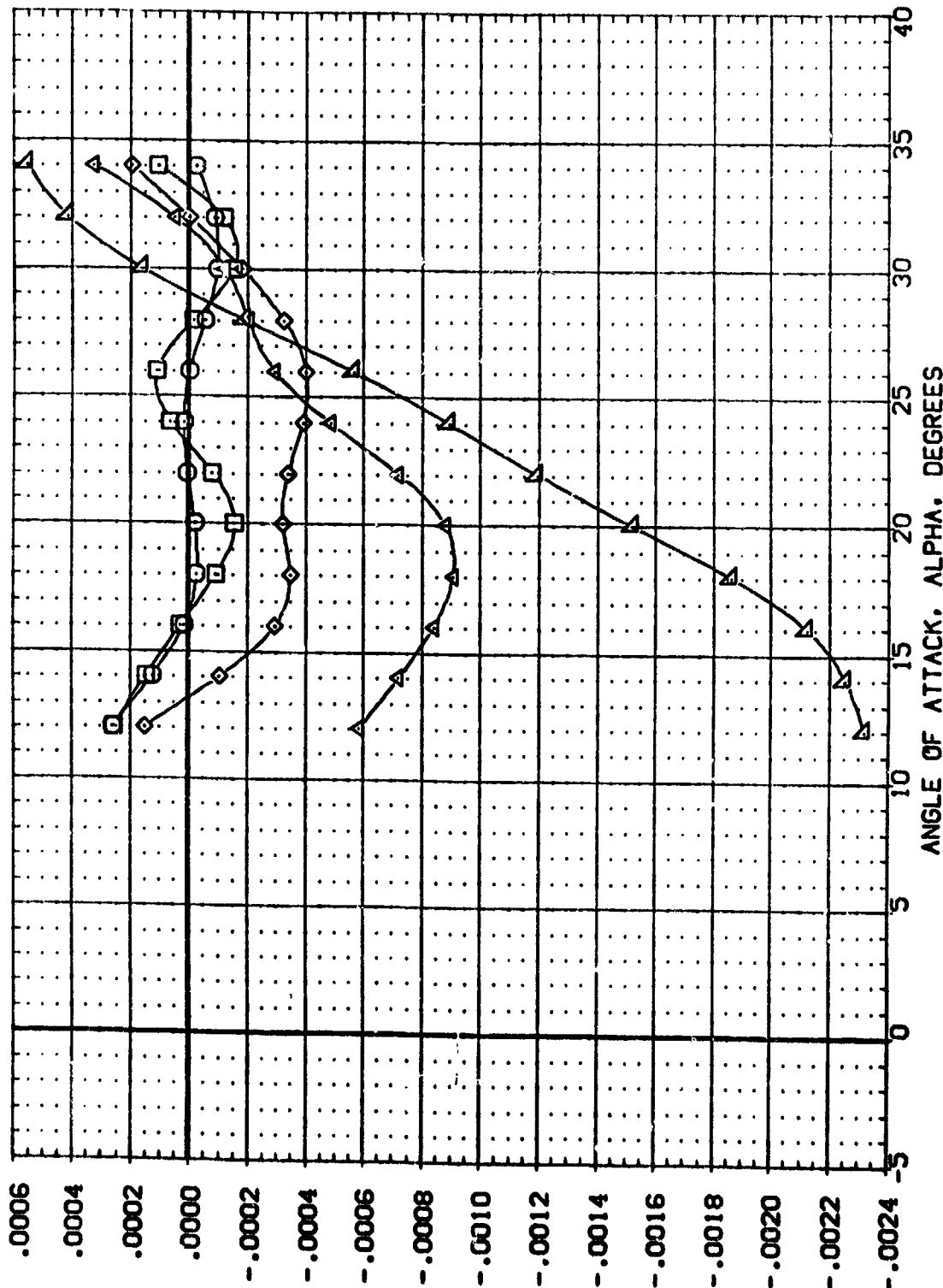
INTERFERENCE EFFECTS OF RIGHT-SIDE PITCH/ROLL JETS FIRING TOWARD VERT. TAIL

C-4

DATA SET SYMBOL CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RV/L	REFERENCE INFORMATION
(AP072)	MA-7,UPVT 1031,ROCKWELL PRR CRB	.000	37.000	1.000	SREF 7245 SQ.FT.
(AP073)	MA-7,UPVT 1031,ROCKWELL PRR CRB	.000	100.000	1.000	LREF 7.8828 INCHES
(AP075)	MA-7,UPVT 1031,ROCKWELL PRR CRB	.000	199.000	1.000	BREF 15.1152 INCHES
(AP076)	MA-7,UPVT 1031,ROCKWELL PRR CRB	.000	328.000	1.000	XTRP 12.9510 INCHES
(AP078)	MA-7,UPVT 1031,ROCKWELL PRR CRB	.000	600.000	1.000	YTRP 6.0000 INCHES
					SCALE .0150

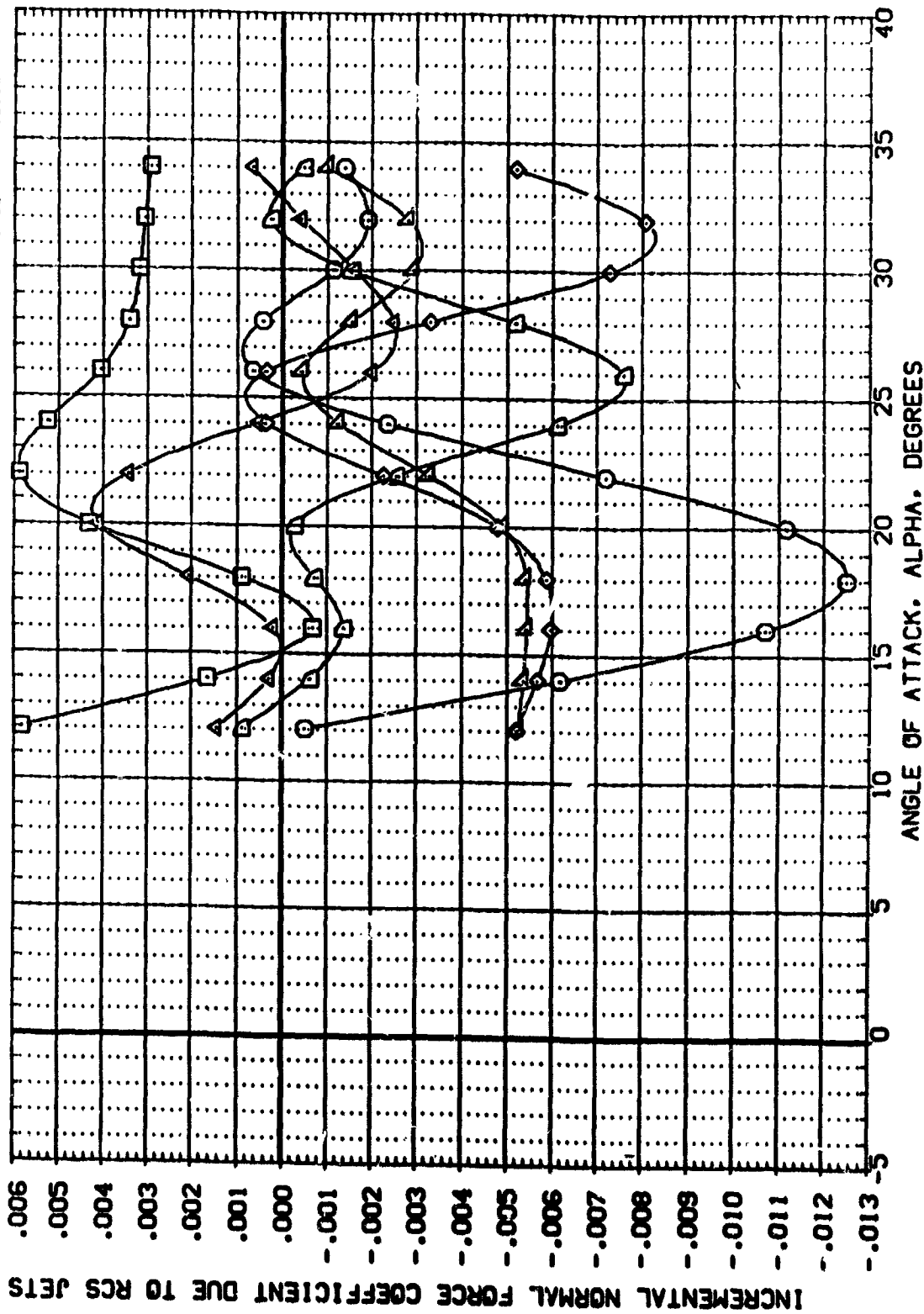
INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS STABILITY AXIS



INTERFERENCE EFFECTS OF RIGHT-SIDE PITCH/ROLL JETS FIRING TOWARD VERT. TAIL

(A)MACH = 4.00

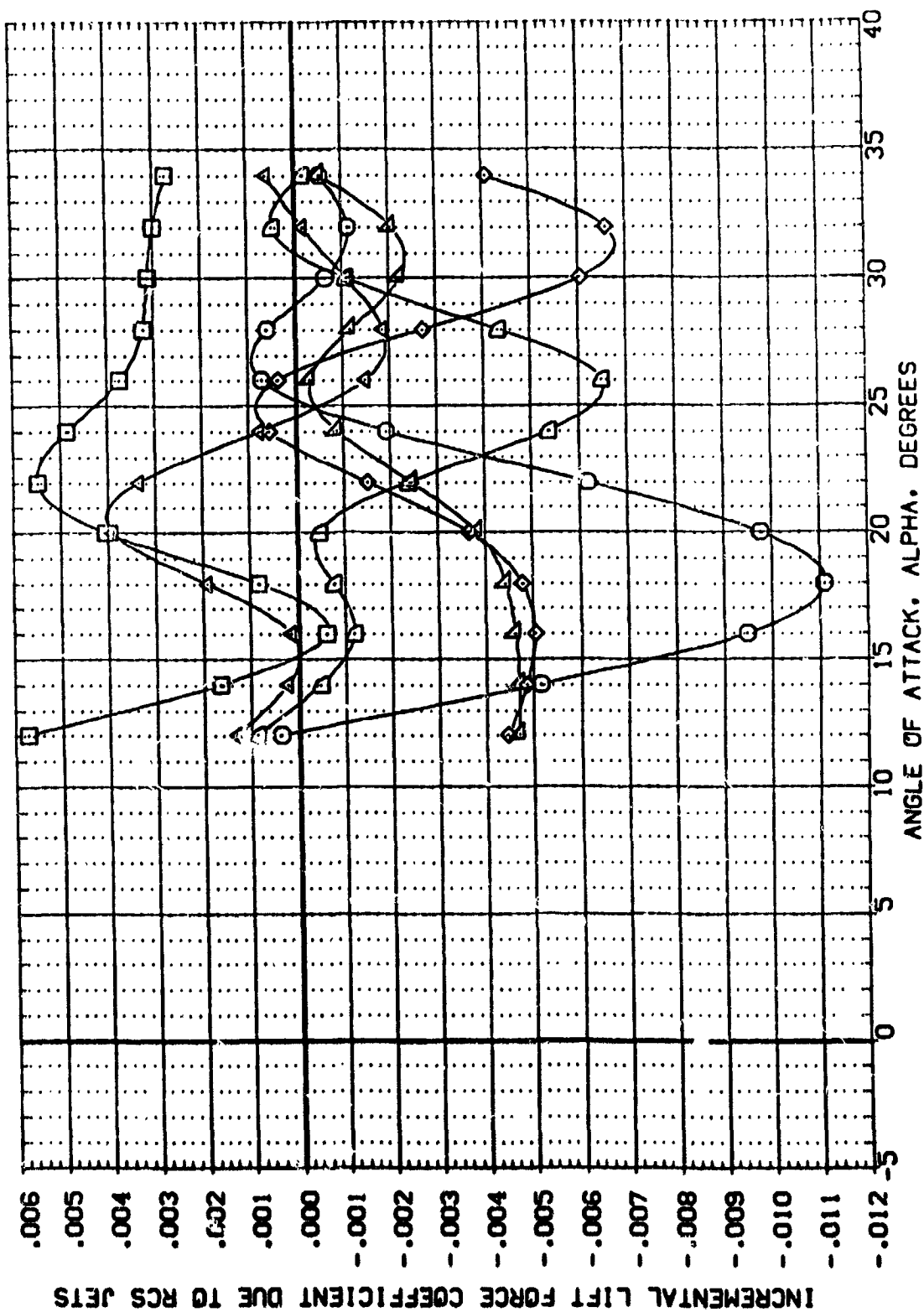
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(AP078)	MA-7,UPVT 1031,ROCKVELL PRR OR8	.000	500.000	1.000	SIZE 7245 SO.FT.
(AP015)	MA-7,UPVT 1031,ROCKVELL PRR OR8	.000	500.000	1.000	LRFF 7.8828 INCHES
(AP076)	MA-7,UPVT 1031,ROCKVELL PRR OR8	.000	328.000	1.000	BREF 15.1152 INCHES
(AP014)	MA-7,UPVT 1031,ROCKVELL PRR OR8	.000	328.000	1.000	XREF 12.9510 INCHES
(AP075)	MA-7,UPVT 1031,ROCKVELL PRR OR8	.000	198.000	1.000	YREF .0000 INCHES
(AP013)	MA-7,UPVT 1031,ROCKVELL PRR OR8	.000	198.000	1.000	ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF VERTICAL TAIL ON INTERFERENCE OF UPWARD FIRING NOZZLES

(M)MACH = 4.00

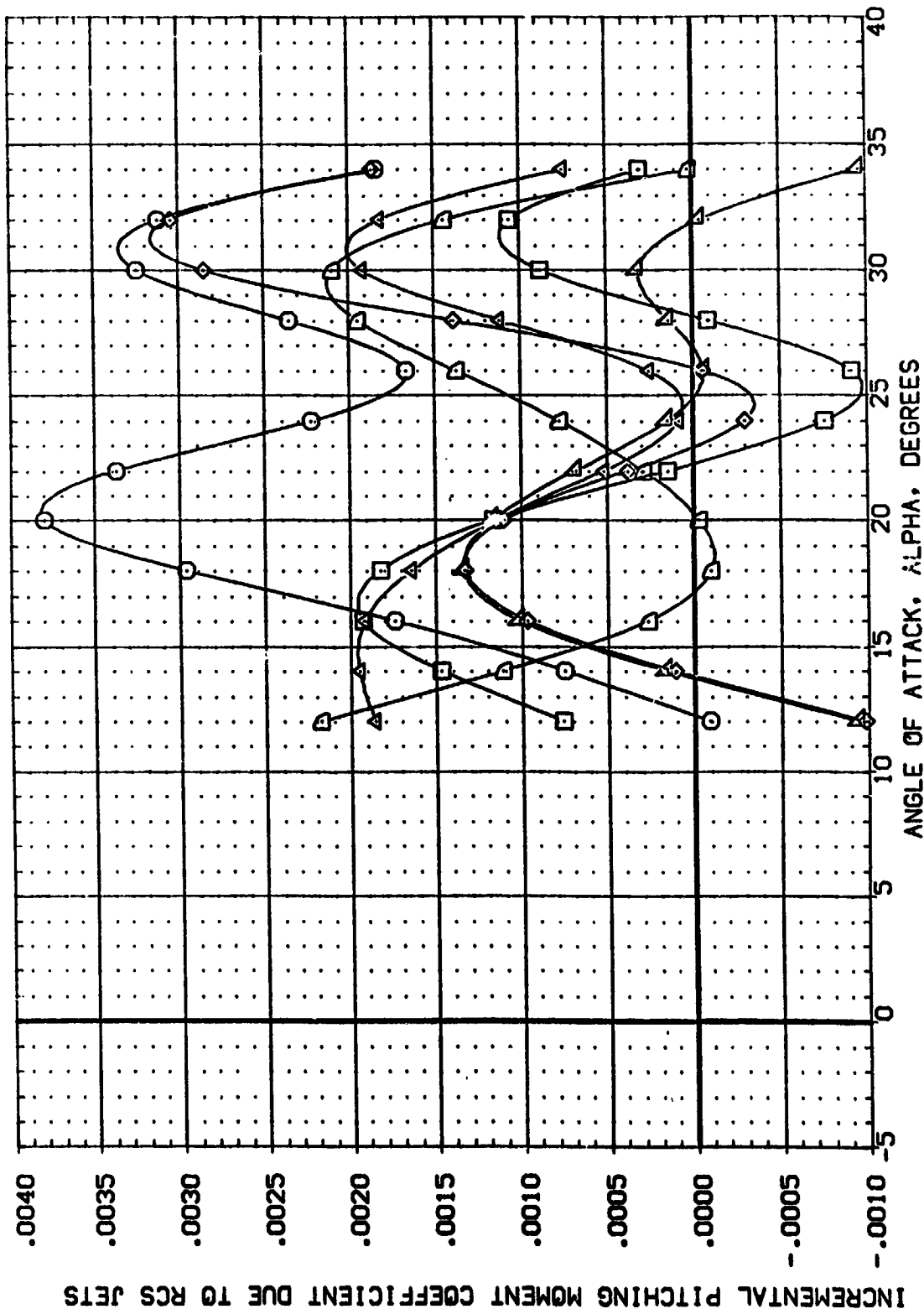
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVA	REFERENCE INFORMATION
(APR078)	MA-7.UPT 1031.ROCKWELL PRR DR8	.000	600.000	1.000	SPCF 7245 SQ.FT.
(APR015)	MA-7.UPT 1031.ROCKWELL PRR DR8	.000	600.000	1.000	LREF 7.8828 INCHES
(APR076)	MA-7.UPT 1031.ROCKWELL PRR DR8	.000	328.000	1.000	BREF 15.1152 INCHES
(APR014)	MA-7.UPT 1031.ROCKWELL PRR DR8	.000	328.000	1.000	VMRP 12.5510 INCHES
(APR075)	MA-7.UPT 1031.ROCKWELL PRR DR8	.000	199.000	1.000	ZMRP 6.0000 INCHES
(APR013)	MA-7.UPT 1031.ROCKWELL PRR DR8	.000	199.000	1.000	SCALE .0150



EFFECT OF VERTICAL TAIL ON INTERFERENCE OF UPWARD FIRING NOZZLES

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	OR8	CONF	BVTH41	BETA	DLPO-J	RM/L	REFERENCE INFORMATION
(APD078)	MA-7,UPVT 1031,ROCKVELL PRR	OR8	CONF	BVTH41	.000	600.000	.000	SREF .7245 SQ.FT.
(APD015)	MA-7,UPVT 1031,ROCKVELL PRR	OR8	CONF	BVTH41	.000	600.000	.000	LREF 7.8828 INCHES
(APD076)	MA-7,UPVT 1031,ROCKVELL PRR	OR8	CONF	BVTH41	.000	328.000	.000	BREF 15.1152 INCHES
(APD014)	MA-7,UPVT 1031,ROCKVELL PRR	OR8	CONF	BVTH41	.000	328.000	.000	YMRP 12.9510 INCHES
(APD075)	MA-7,UPVT 1031,ROCKVELL PRR	OR8	CONF	BVTH41	.000	199.000	.000	ZMRP 6.0000 INCHES
(APD013)	MA-7,UPVT 1031,ROCKVELL PRR	OR8	CONF	BVTH41	.000	199.000	.000	SCALE .0150

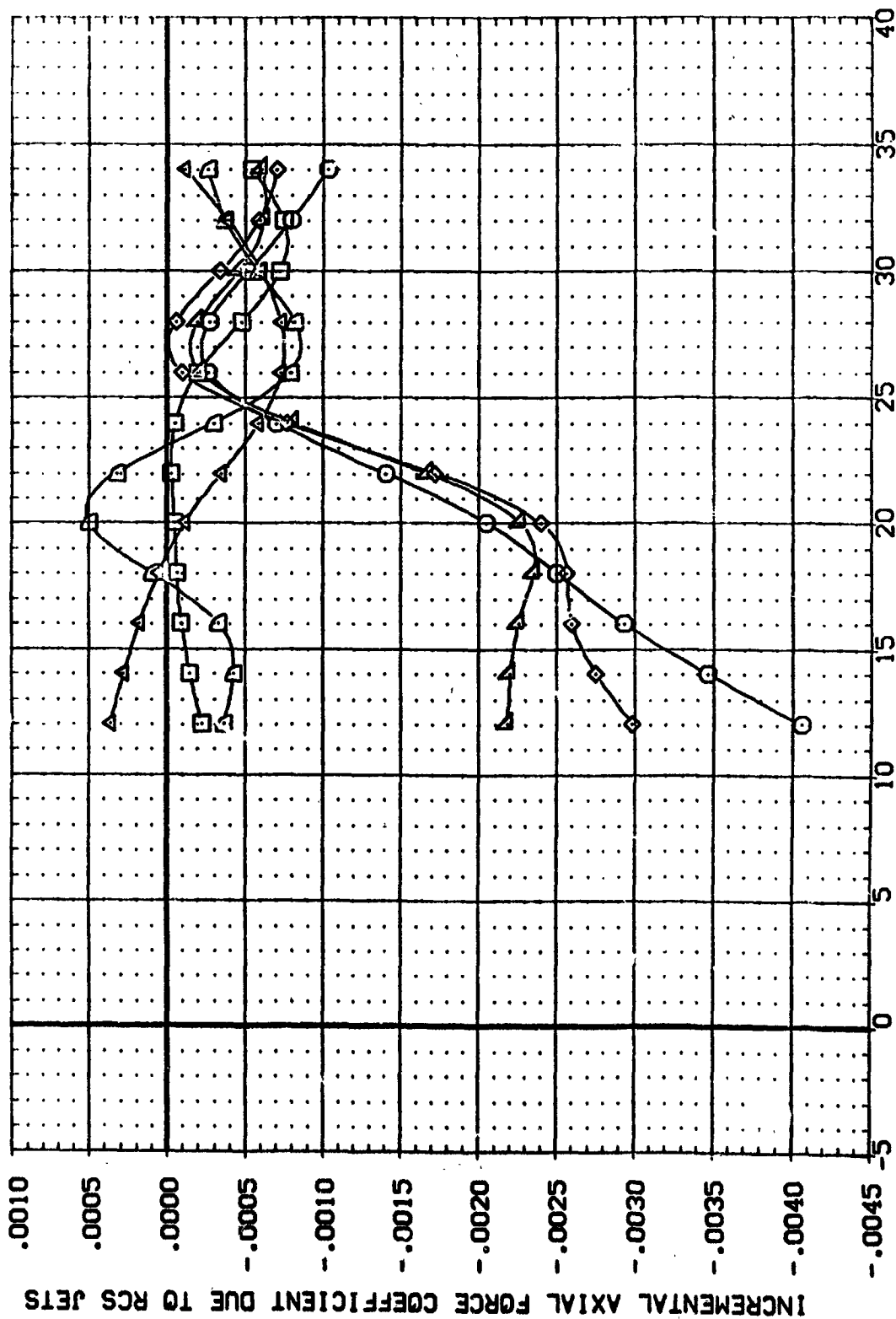


EFFECT OF VERTICAL TAIL ON INTERFERENCE OF UPWARD FIRING NOZZLES

(AJMACH = 4.00



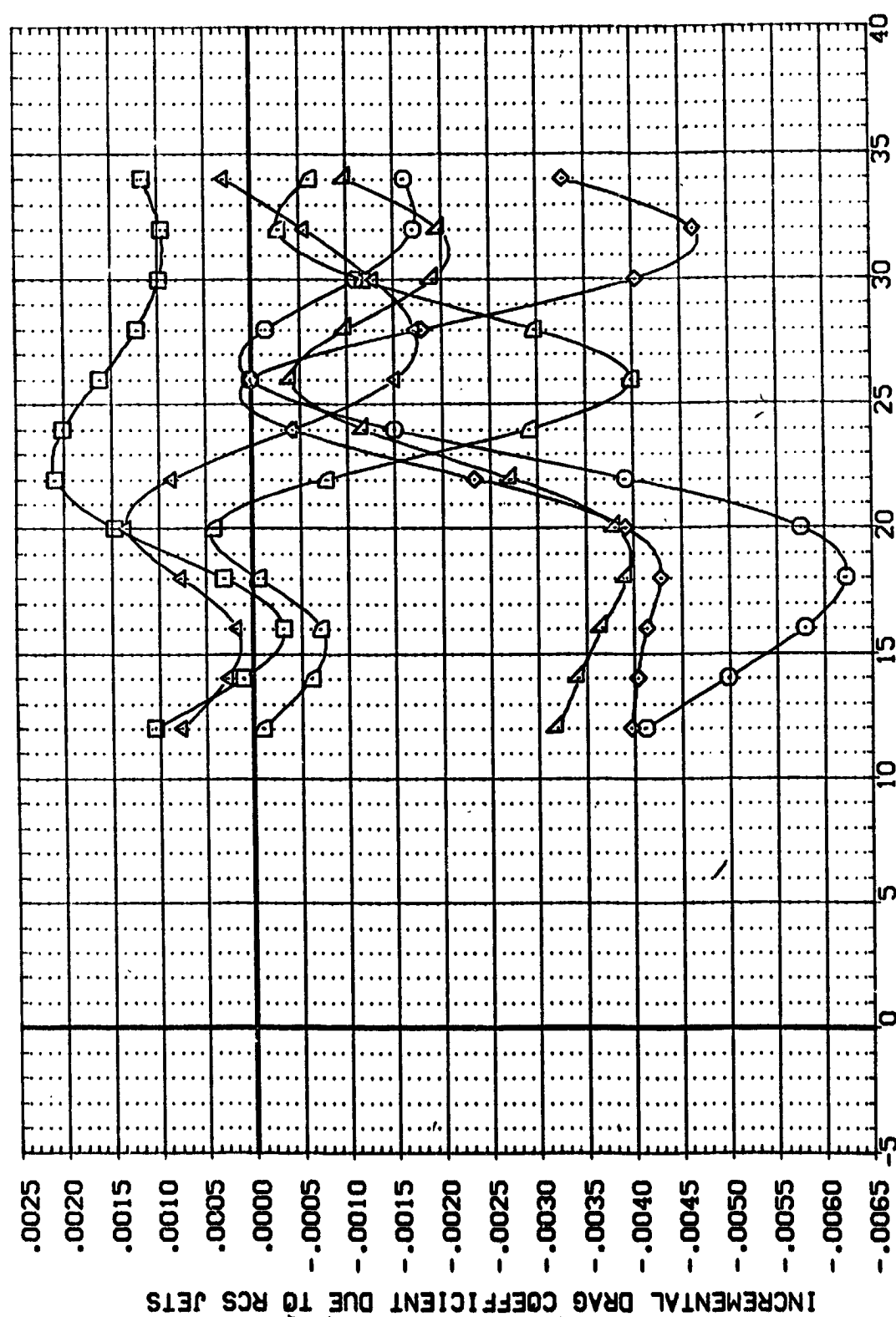
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(AP078)	MA-7, UPVT 1031, ROCKVELL PRR OR8, CONF. BVTN41	.000	600.000	1.000	SREF .7245 52. FT.
(AP015)	MA-7, UPVT 1031, ROCKVELL PRR OR8, CONF. BVTN41	.000	600.000	1.000	LREF 7.8228 INCHES
(AP076)	MA-7, UPVT 1031, ROCKVELL PRR OR8, CONF. BVTN41	.000	328.000	1.000	BREF 15.1152 INCHES
(AP014)	MA-7, UPVT 1031, ROCKVELL PRR OR8, CONF. BVTN41	.000	328.000	1.000	XMRP 12.9510 INCHES
(AP075)	MA-7, UPVT 1031, ROCKVELL PRR OR8, CONF. BVTN41	.000	198.000	1.000	YMRP .0000 INCHES
(AP013)	MA-7, UPVT 1031, ROCKVELL PRR OR8, CONF. BVTN41	.000	198.000	1.000	ZMRP 6.0000 INCHES
					SCALE .0150



EFFECT OF VERTICAL TAIL ON INTERFERENCE OF UPWARD FIRING NOZZLES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CONF.	BVTN41	BETA	DLPO-V	RNVL	REFERENCE INFORMATION
(AP078)	MA-7, UPVT 1031, ROCKVELL	PRR	CRB	.000	600.000	.000	SREF 7245 50 FT
(AP015)	MA-7, UPVT 1031, ROCKVELL	PRR	CRB	.000	600.000	.000	LREF 7.8928 INCHES
(AP076)	MA-7, UPVT 1031, ROCKVELL	PRR	CRB	.000	328.000	.000	BREF 15.1152 INCHES
(AP014)	MA-7, UPVT 1031, ROCKVELL	PRR	CRB	.000	328.000	.000	XMRP 12.9510 INCHES
(AP075)	MA-7, UPVT 1031, ROCKVELL	PRR	CRB	.000	158.000	.000	YMRP .0000 INCHES
(AP013)	MA-7, UPVT 1031, ROCKVELL	PRR	CRB	.000	158.000	.000	ZMRP 6.0030 INCHES
							SCALE .0150



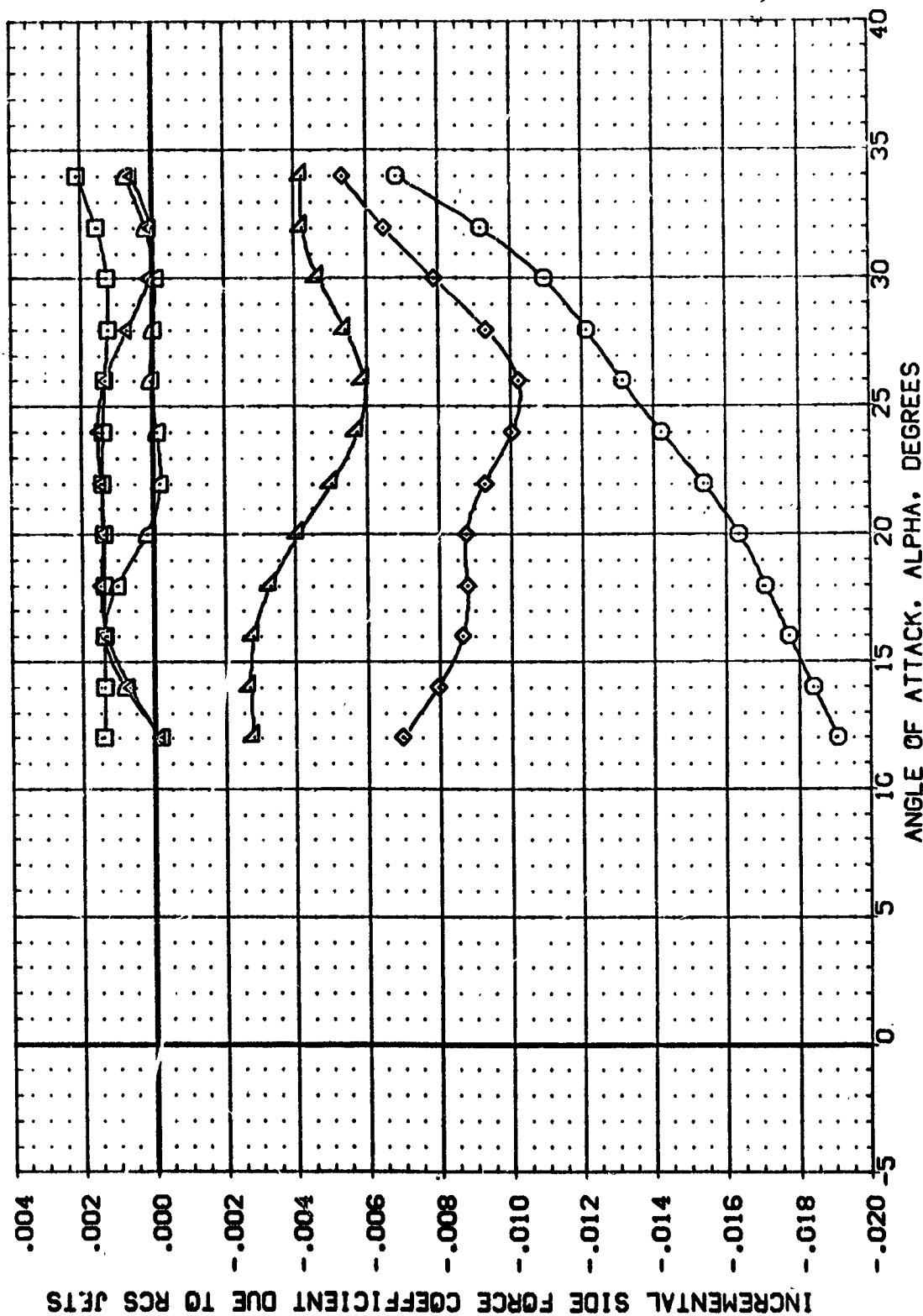
EFFECT OF VERTICAL TAIL ON INTERFERENCE OF UPWARD FIRING NOZZLES

(A)MACH = 4.00

DATA SET SYMBOL      CONFIGURATION DESCRIPTION      BETA      CLPO-J      RV/L      REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	CLPO-J	RV/L	REFERENCE INFORMATION
(APH078)	MA-7.0PVT 1031.ROCKWELL PRR CRB. CONF.	.000	600.000	1.000	SREF 7.7245 SQ.FT.
(APH015)	MA-7.0PVT 1031.ROCKWELL PRR CRB. CONF.	.000	600.000	1.000	LREF 7.8828 INCHES
(APH076)	MA-7.0PVT 1031.ROCKWELL PRR CRB. CONF.	.000	328.000	1.000	BREF 15.1152 INCHES
(APH014)	MA-7.0PVT 1031.ROCKWELL PRR CRB. CONF.	.000	328.000	1.000	XRPP 12.9510 INCHES
(APH075)	MA-7.0PVT 1031.ROCKWELL PRR CRB. CONF.	.000	199.000	1.000	YRPP 6.0000 INCHES
(APH013)	MA-7.0PVT 1031.ROCKWELL PRR CRB. CONF.	.000	199.000	1.000	ZRPP 6.0150 INCHES

SCALE



EFFECT OF VERTICAL TAIL ON INTERFERENCE OF UPWARD FIRING NOZZLES

(A)MACH = 4.00

REFERENCE INFORMATION  
 SREF 7245 SQ.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 XGRP 12.9610 INCHES  
 YGRP 6.0000 INCHES  
 ZGRP 6.0000 INCHES  
 SCALE 0.150

BETA DLP0-J RV/L  
 .000 600.000 1.000  
 .000 600.000 1.000  
 .000 328.000 1.000  
 .000 328.000 1.000  
 .000 199.000 1.000  
 .000 199.000 1.000

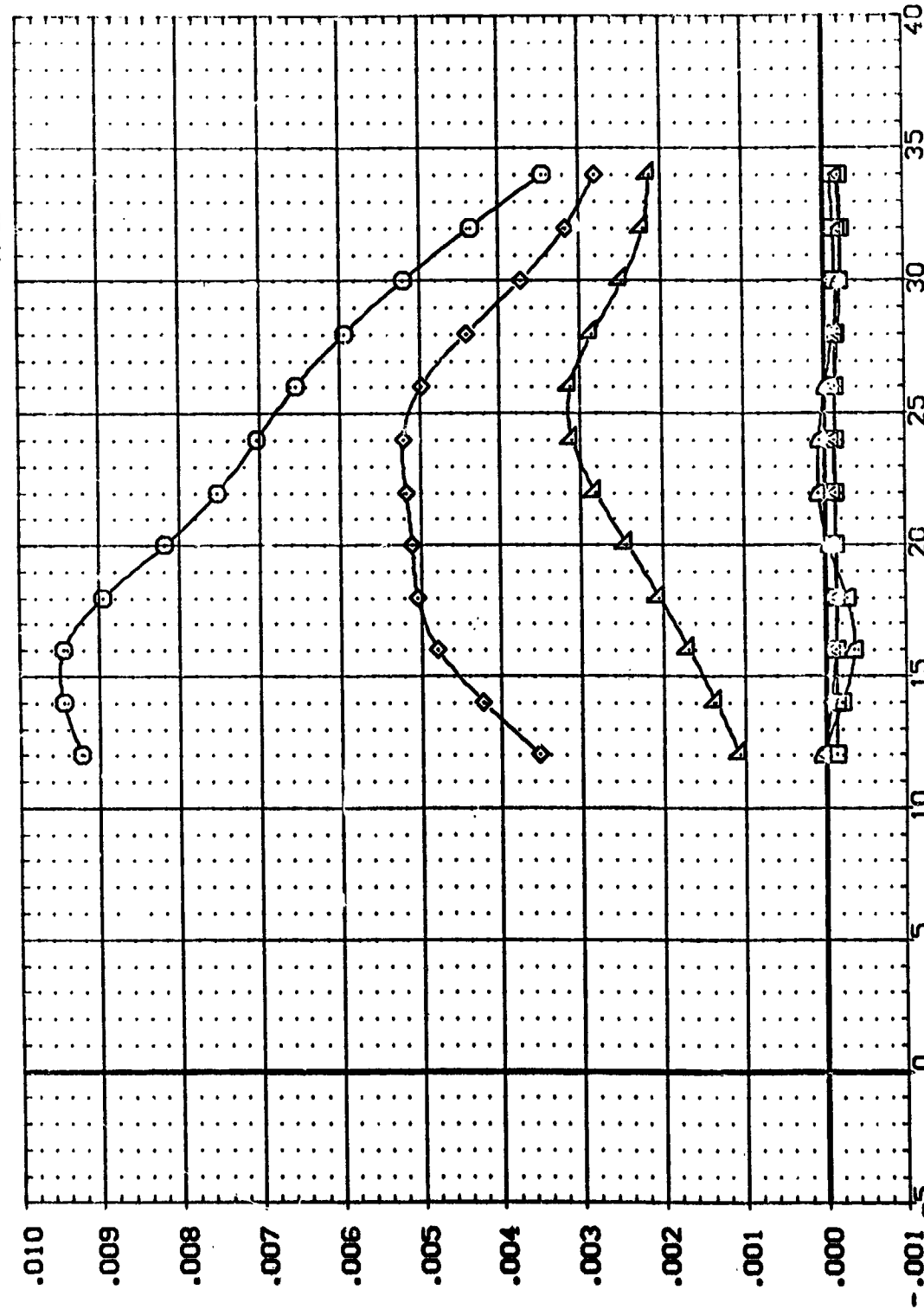
BVTH41  
 BVTH41  
 BVTH41  
 BVTH41  
 BVTH41

CONF. CONF.  
 CONF. CONF.  
 CONF. CONF.  
 CONF. CONF.  
 CONF. CONF.

CONFIGURATION DESCRIPTION  
 MA-7,UPVT 1031,ROCKWELL PRR ORB.  
 MA-7,UPVT 1031,ROCKWELL PRR ORB.  
 MA-7,UPVT 1031,ROCKWELL PRR ORB.  
 MA-7,UPVT 1031,ROCKWELL PRR ORB.  
 MA-7,UPVT 1031,ROCKWELL PRR ORB.  
 MA-7,UPVT 1031,ROCKWELL PRR ORB.

DATA SET SYMBOL  
 (AP078)  
 (AP015)  
 (AP076)  
 (AP014)  
 (AP075)  
 (AP013)

INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (BODY AXIS)



ANGLE OF ATTACK, ALPHA, DEGREES

EFFECT OF VERTICAL TAIL ON INTERFERENCE OF UPWARD FIRING NOZZLES

(A)MACH = 4.00

DATA SET SYMBOL: (APMD78) (APMD15) (APMD76) (APMD14) (APMD75) (APMD13)

CONFIGURATION DESCRIPTION: MA-7.LPVT 1031.ROCKWELL PRR ORB. CONF. BVTN41 BVTN41 BVTN41 BVTN41 BVTN41

BETA: .000 .000 .000 .000 .000

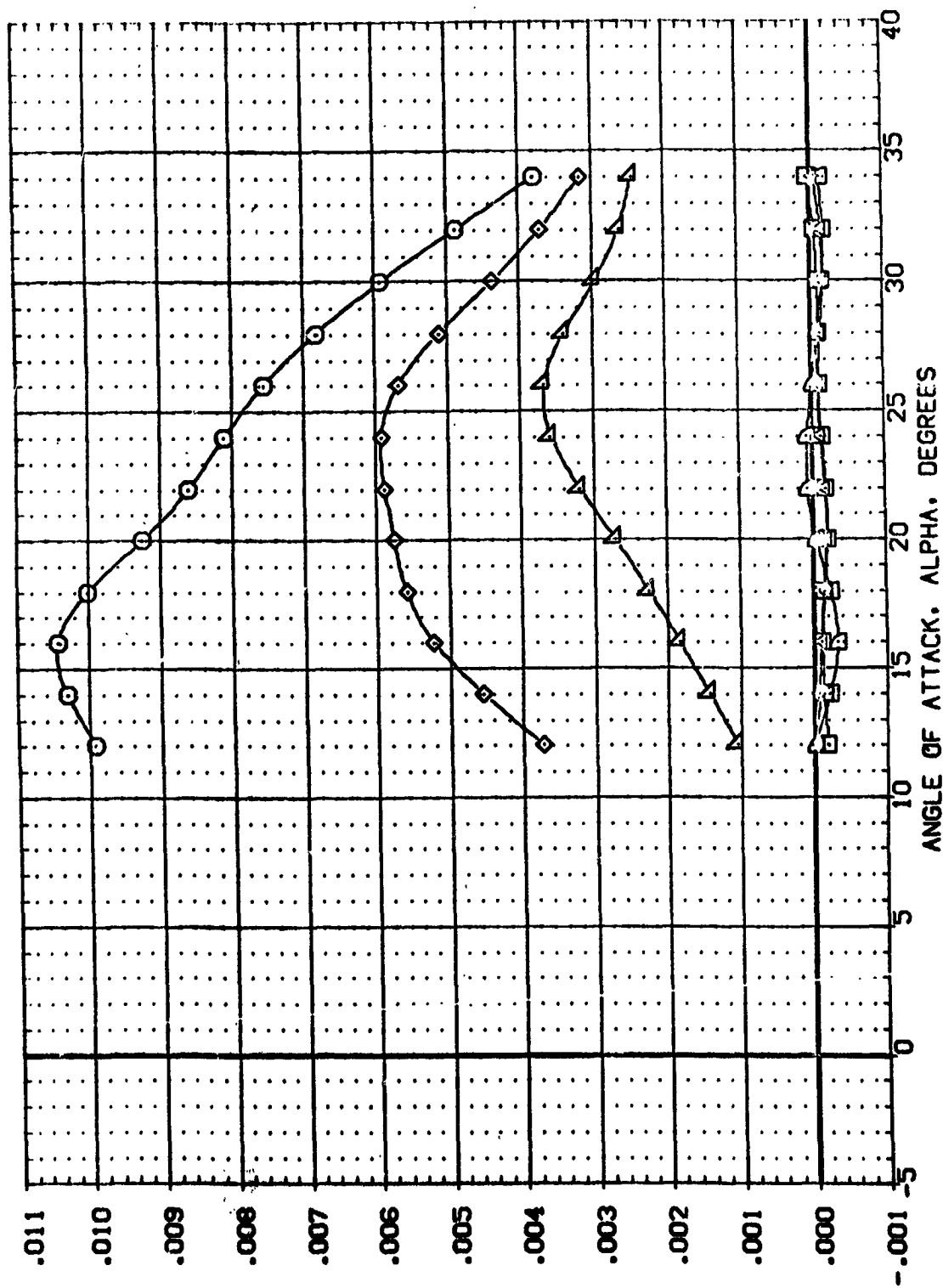
DLPO-J: 600.000 600.000 328.000 328.000 199.000

RVL: 1.000 1.000 1.000 1.000 1.000

REFERENCE INFORMATION: SREF 7.245 SO.FT. 7.8828 INCHES 15.1152 INCHES 12.9510 INCHES 6.0000 INCHES 6.0000 INCHES 6.0150 INCHES

SCALE: SREF LREF BREF XMRP YMRP ZMRP

INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (STABILITY AXIS)

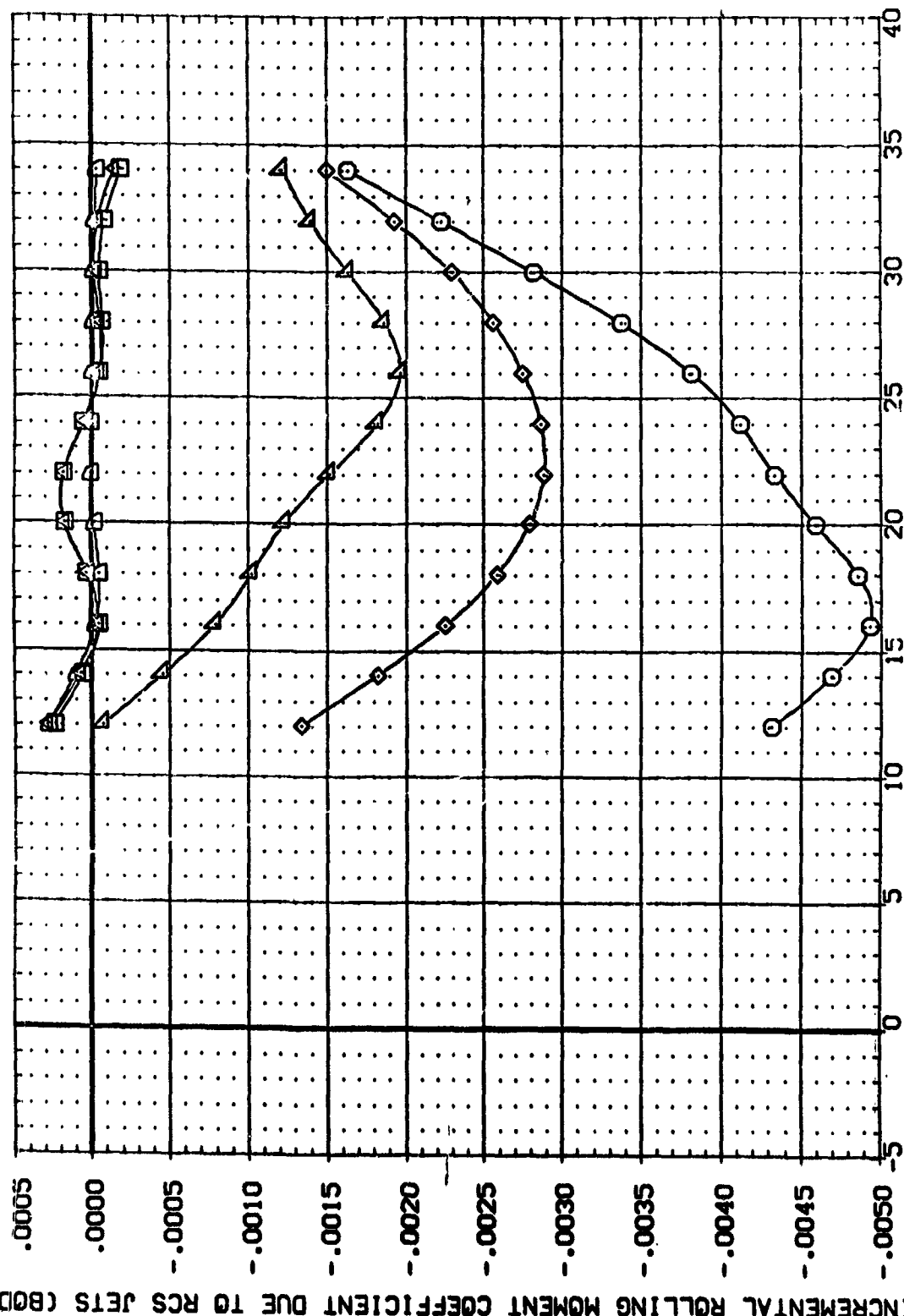


EFFECT OF VERTICAL TAIL ON INTERFERENCE OF UPWARD FIRING NOZZLES

(A)MACH = 4.00

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    CONF.    BVTN41    BETA    DLPQ-J    RV/L    REFERENCE INFORMATION

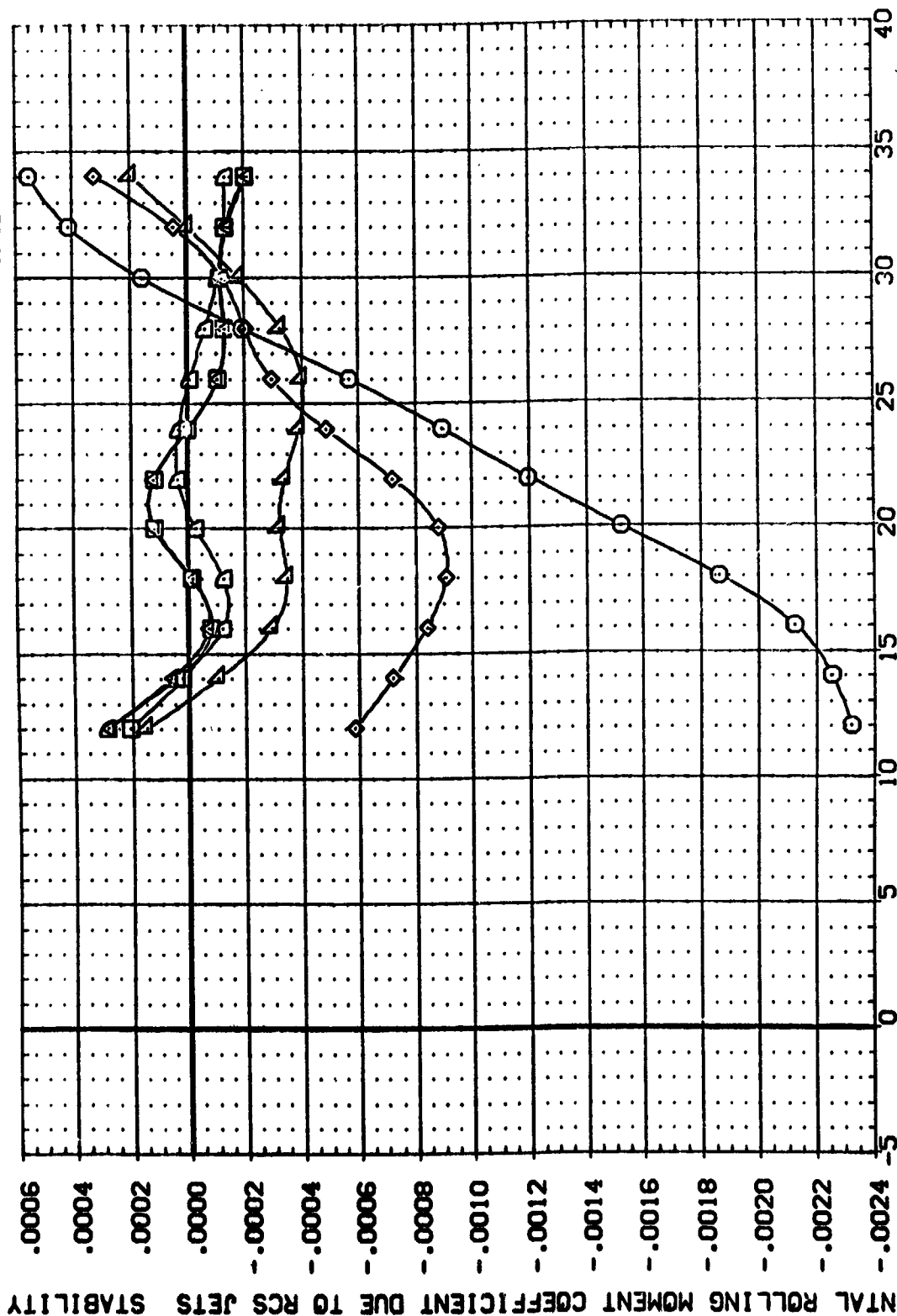
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CONF.	BVTN41	BETA	DLPQ-J	RV/L	REFERENCE INFORMATION
(APD078)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN41	.000	600.000	1.000	SREF .7245 SO.FT.
(APD015)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN41	.000	600.000	1.000	LREF 7.8828 INCHES
(APD076)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN41	.000	328.000	1.000	BREF 15.1152 INCHES
(APD014)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN41	.000	328.000	1.000	XGRP 12.9510 INCHES
(APD075)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN41	.000	199.000	1.000	YGRP .0000 INCHES
(APD013)	MA-7, UPVT 1031, ROCKWELL PRR ORB.	CONF.	BVTN41	.000	199.000	1.000	ZGRP .0150 INCHES



EFFECT OF VERTICAL TAIL ON INTERFERENCE OF UPWARD FIRING NOZZLES

(A)MACH = 4.00

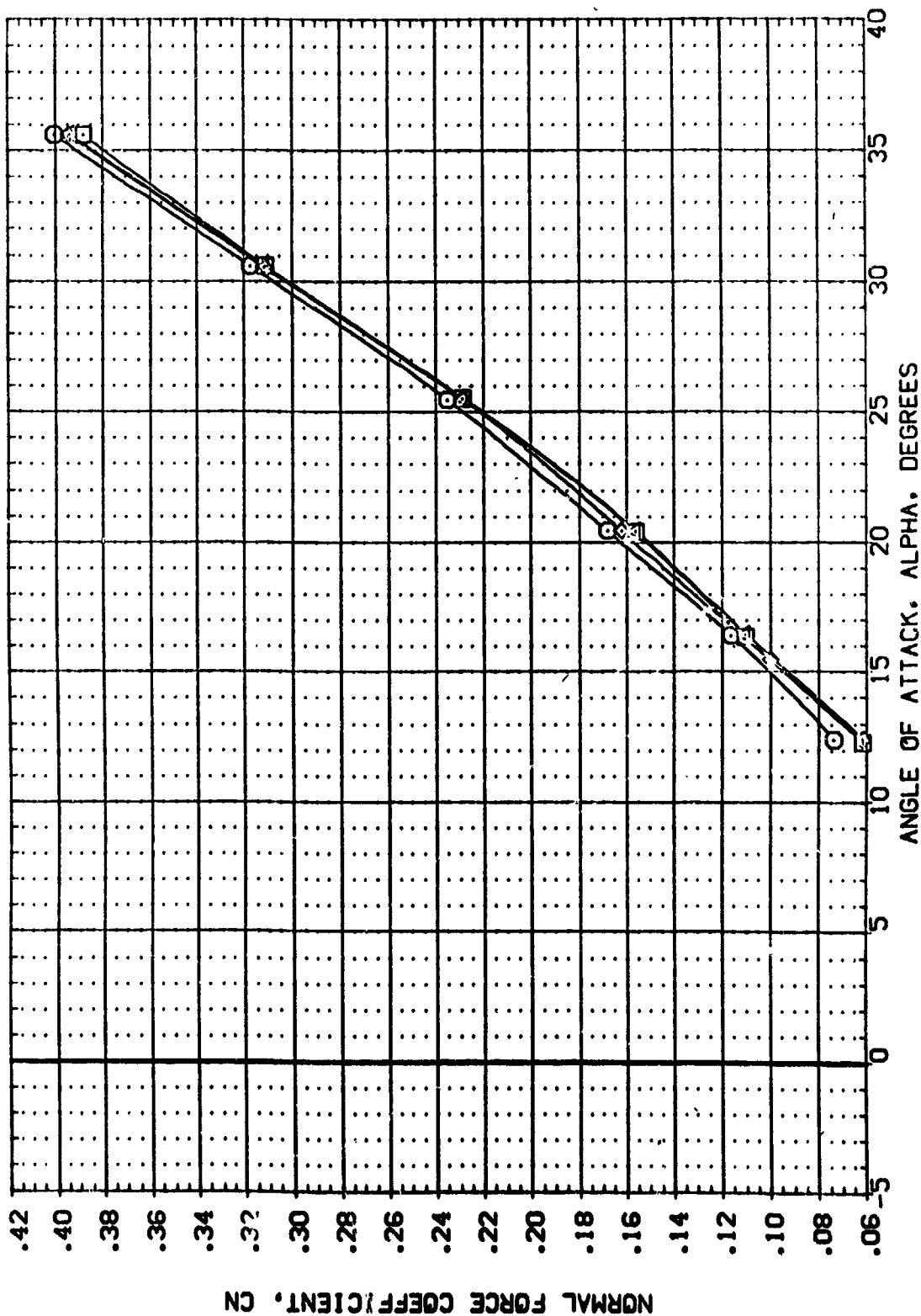
REFERENCE INFORMATION	SC.F.F.
SREF	.7245
LREF	7.8828
BREF	15.1152
XXMR	12.9510
YMRP	.0030
ZMRP	6.0000
SCALE	.0150



### EFFECT OF VERTICAL TAIL ON INTERFERENCE OF UPWARD FIRING NOZZLES

**(A)MACH = 4.00**

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	P0-JET	RN/L	REFERENCE INFORMATION
(CPH004)	MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF. BTN40	.000	.000	1.000	SREF .7245 SO.FT.
(CPH001)	MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF. BTN1	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH002)	MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF. BTN1	.000	328.000	1.000	BREF 15.1152 INCHES
(CPH003)	MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF. BTN1	.000	600.000	1.000	XREF 12.5510 INCHES
					YREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150

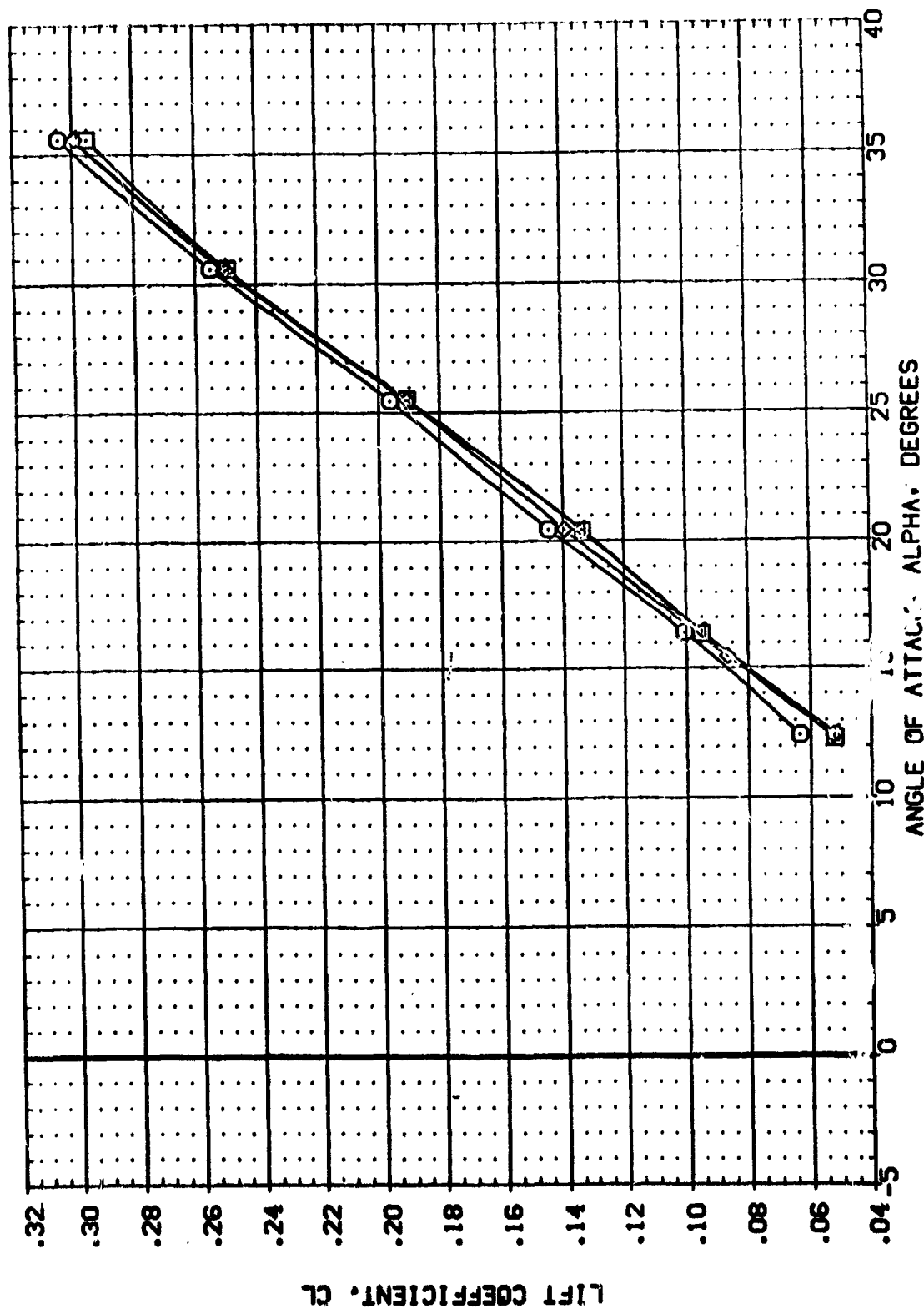


EFFECT OF YAW JET PRESSURE WITH WING OFF

(M)MACH = 4.00



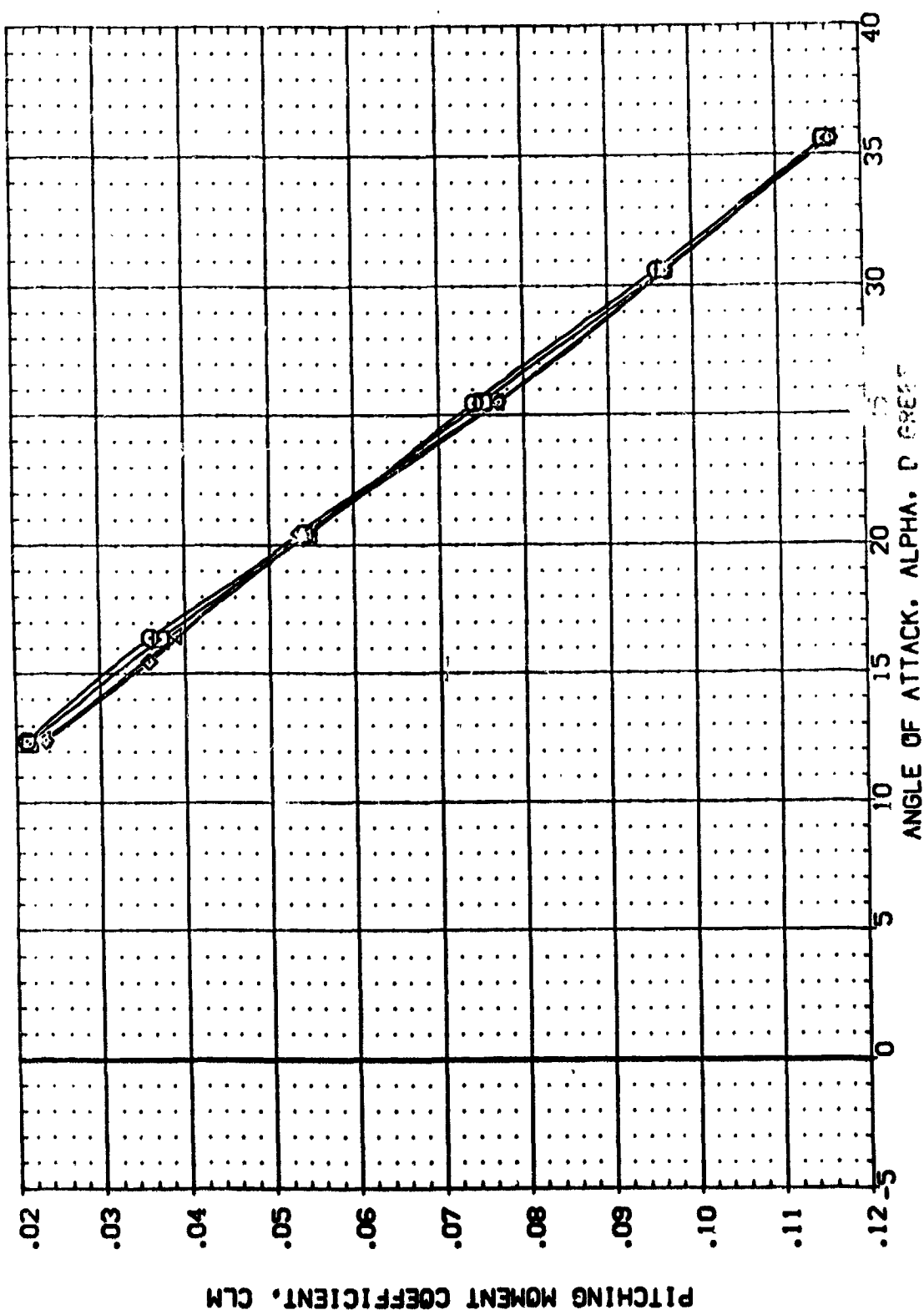
DATA SET SYMBOL	CONF	DESCRIPTION	BETA	PG-JET	RM/L	REFERENCE INFORMATION
(CPH004)	MA-7, JPV	1031, ROCKWELL	.000	.000	1.000	SREF 7245 SQ. FT.
(CPH001)	MA-7, JPV	1031, ROCKWELL	.000	37.000	1.000	LREF 7.6828 INCHES
(CPH002)	MA-7, JPV	1031, ROCKWELL	.000	328.000	1.000	BREF 15.1152 INCHES
(CPH003)	MA-7, JPV	1031, ROCKWELL	.000	600.000	1.000	YMRP 12.5510 INCHES
						ZMRP 6.0000 INCHES
						SCALE .0150



EFFECT OF YAW JET PRESSURE WITH WING OFF

(A)MACH = 4.00

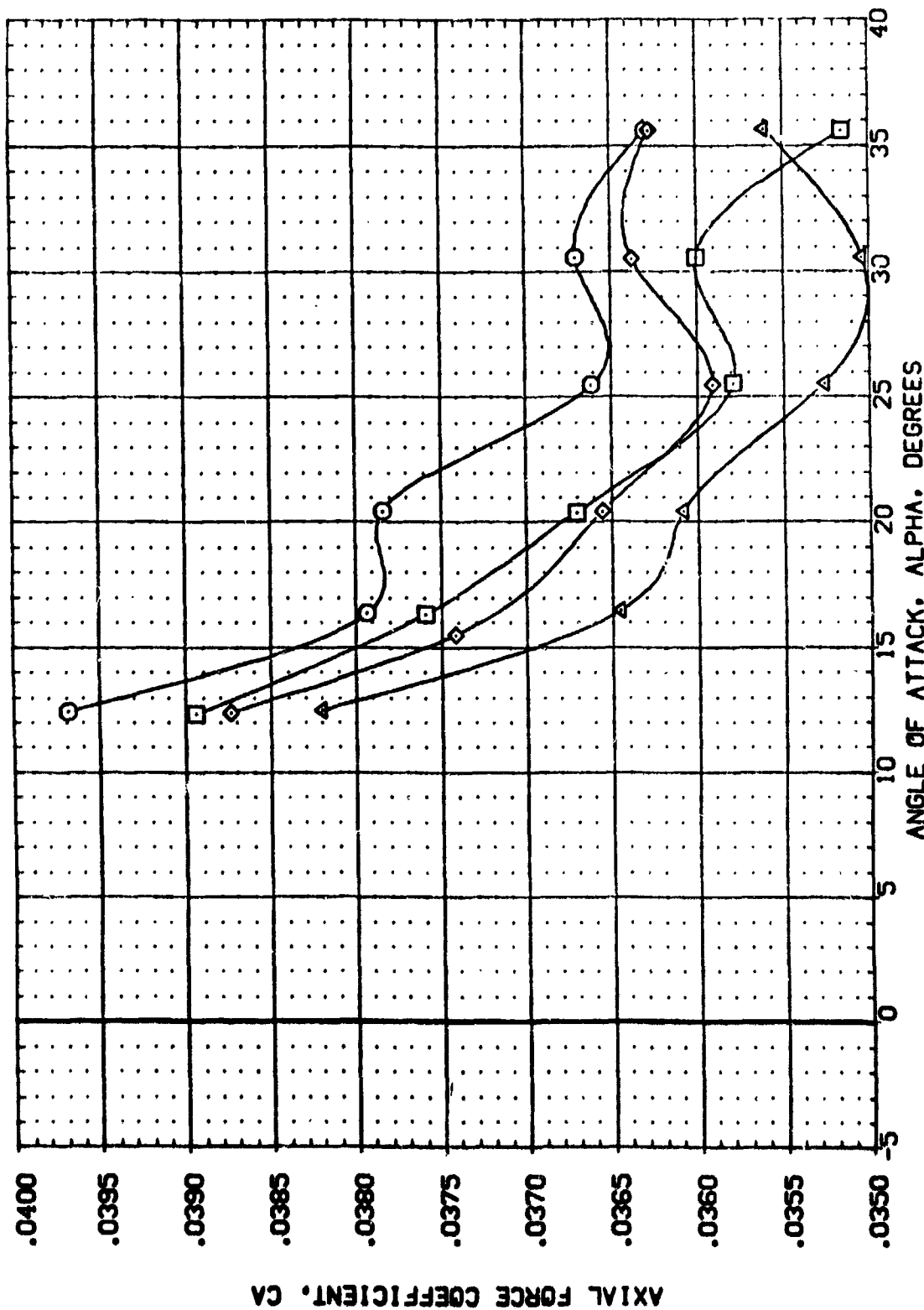
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH004)	MA-7-UPVT 1031-ROCKWELL PRR CR8	.000	.000	1.000	SREF 7245 SQ. FT.
(CPH001)	MA-7-UPVT 1031-ROCKWELL PRR CR8	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH002)	MA-7-UPVT 1031-ROCKWELL PRR CR8	.000	328.000	1.000	BREF 15.1152 INCHES
(CPH003)	MA-7-UPVT 1031-ROCKWELL PRR CR8	.000	600.000	1.000	XREF 12.9510 INCHES
					YREF .0000 INCHES
					ZREF .0000 INCHES
					SCALE .0150



EFFECT OF YAW JET PRESSURE WITH WING OFF

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVL	REFERENCE INFORMATION
(CPH001)	MA-7-UPVT 1031-ROCKWELL PRR ORB	.000	.000	1.000	SREF 7.745 50. FT.
(CPH002)	MA-7-UPVT 1031-ROCKWELL PRR ORB	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH003)	MA-7-UPVT 1031-ROCKWELL PRR ORB	.000	328.000	1.000	BREF 15.1152 INCHES
		.000	600.000	1.000	YREF 12.9510 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF YAW JET PRESSURE WITH WING OFF

(A)MACH = 4.00

REFERENCE INFORMATION  
 SREF 7245 50.0 FT  
 LREF 7.6828 INCHES  
 BREF 15.1152 INCHES  
 XREF 12.9510 INCHES  
 YREF .0000 INCHES  
 ZREF 6.0000 INCHES  
 SCALE .0150

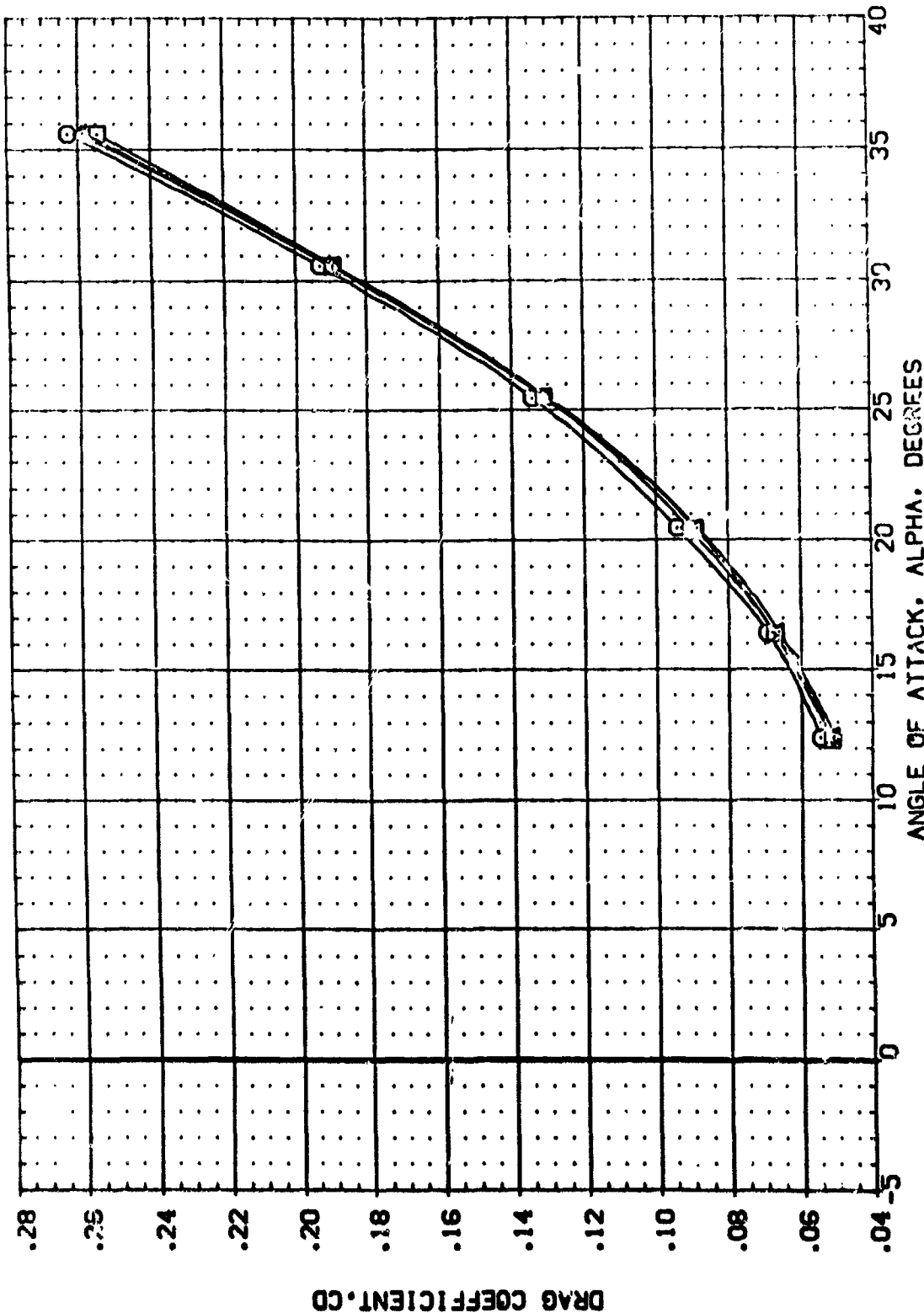
BETA .000  
 PO-JET .000  
 PVAL 1.000  
 37.000  
 328.000  
 600.000

BTM40  
 BTM1  
 BTM1  
 BTM1

CONF: BTM40  
 CONF: BTM1  
 CONF: BTM1  
 CONF: BTM1

DATA SET SYMBOL  
 (CP0004)  
 (CP0001)  
 (CP0002)  
 (CP0003)

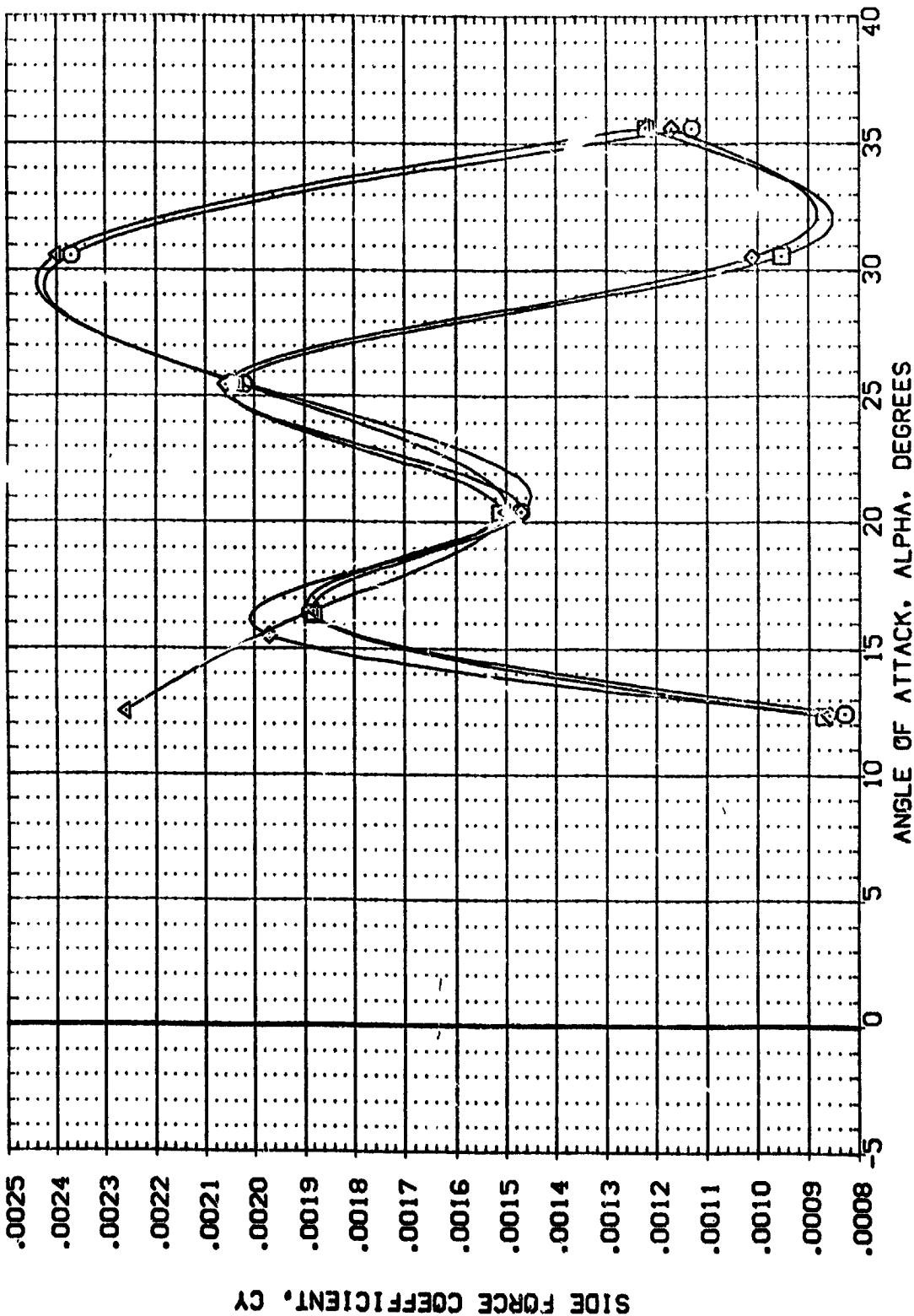
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 CONF: BTM1  
 CONF: BTM1  
 CONF: BTM1



EFFECT OF YAW JET PRESSURE WITH WING OFF

(M)MACH = 4.00

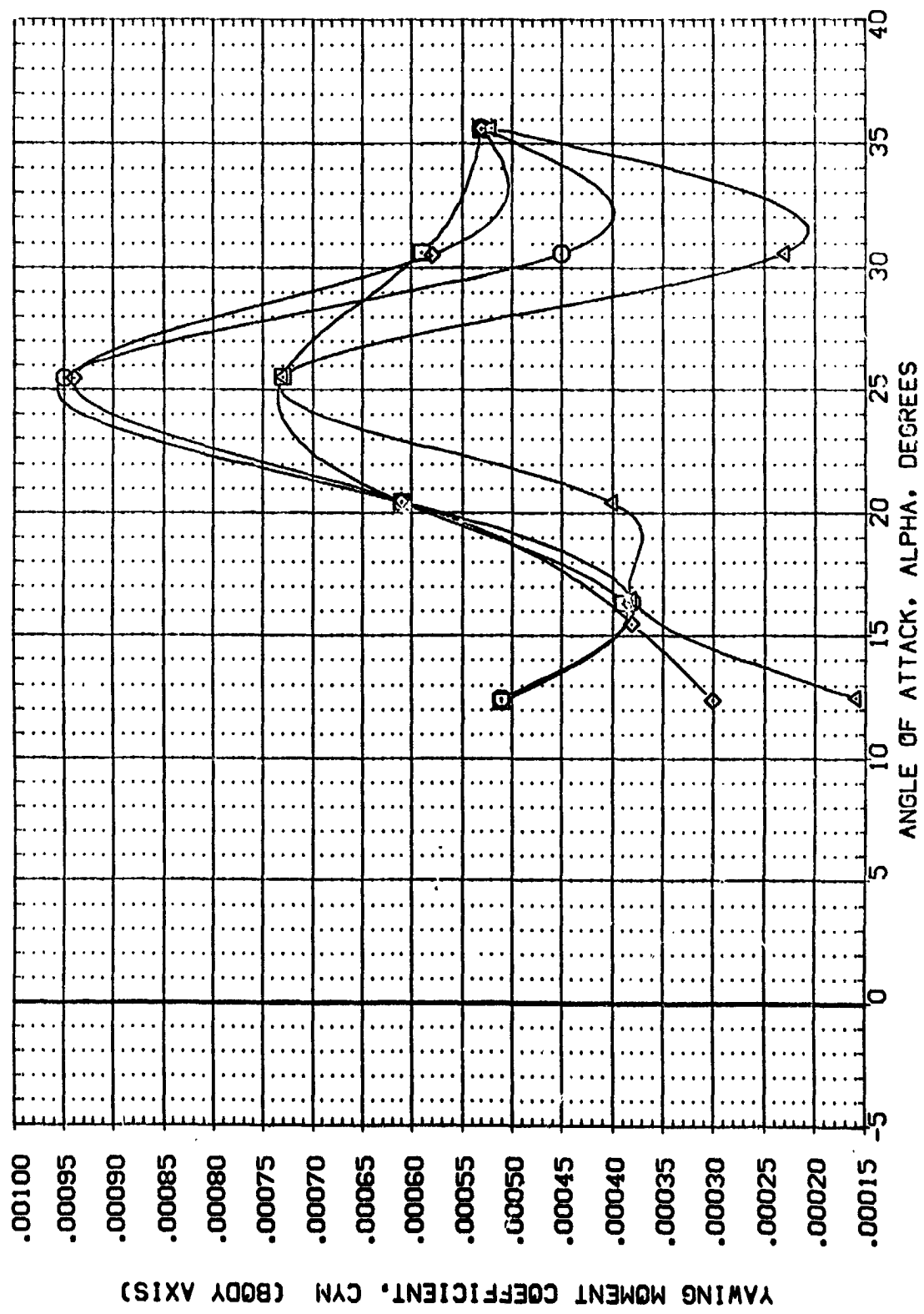
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CP4004)	MA-7, UPVT 1031, PCKWELL	.000	.000	1.000	SREF 7245 SQ.FT.
(CP4001)	MA-7, UPVT 1031, PCKWELL	.000	37.000	1.000	LREF 7.8828 INCHES
(CP4002)	MA-7, UPVT 1031, PCKWELL	.000	328.000	1.000	BREF 15.1152 INCHES
(CP4003)	MA-7, UPVT 1031, PCKWELL	.000	600.000	1.000	YMRP 12.9510 INCHES
					ZMRP .0000 INCHES
					SCALE .0150



EFFECT OF YAW JET PRESSURE WITH WING OFF

MAJ MACH = 4.00

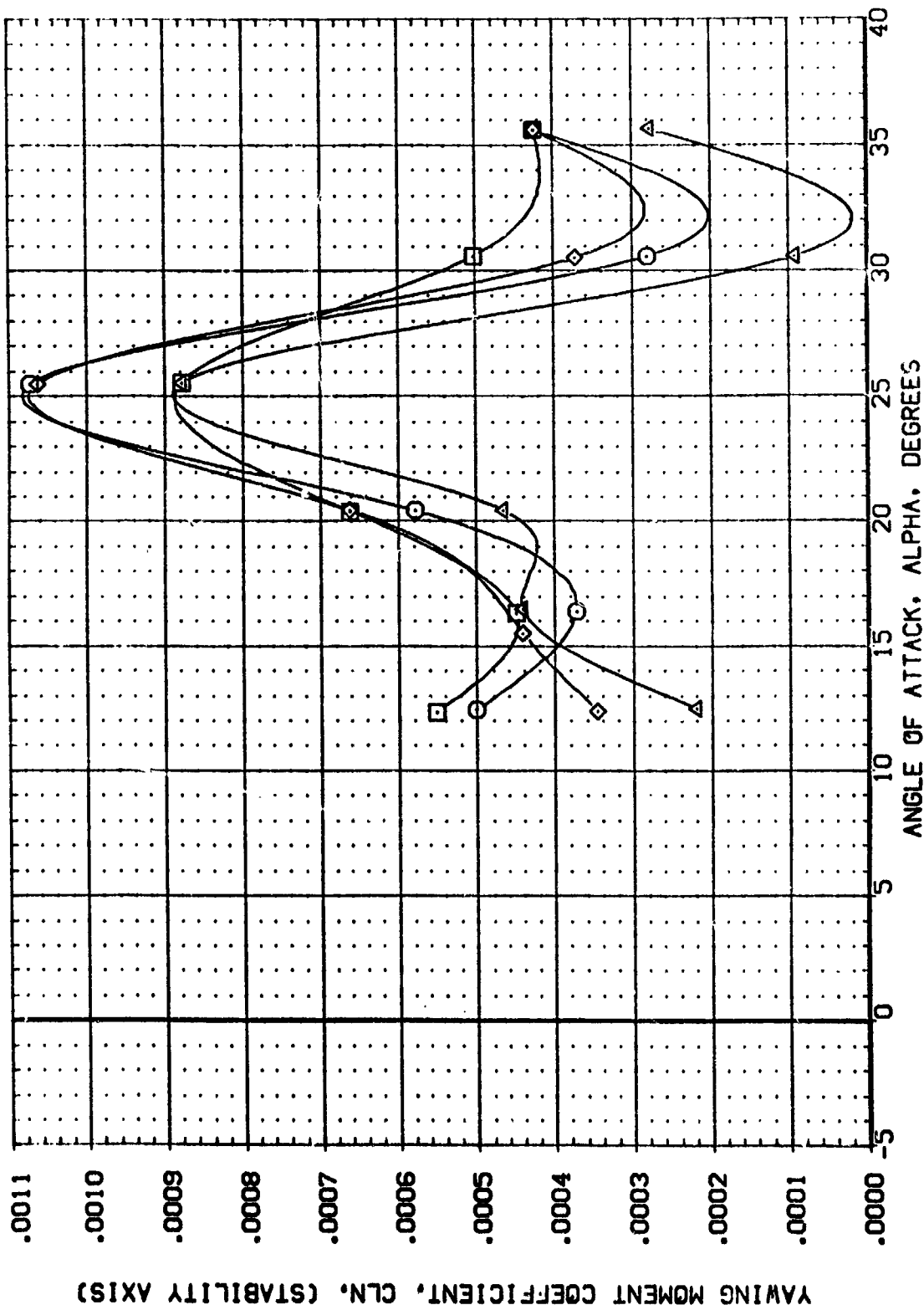
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RV/L	REFERENCE INFORMATION
(CPH004)	MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF. BTN40	.000	.000	1.000	SREF 7245 SQ. FT.
(CPH001)	MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF. BTN1	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH002)	MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF. BTN1	.000	328.000	1.000	BREF 15.1152 INCHES
(CPH003)	MA-7, UPVT 1031, ROCKWELL PRR ORB, CONF. BTN1	.000	600.000	1.000	XREF 12.9510 INCHES
					YREF .0000 INCHES
					ZREF .0150 INCHES
					SCALE



EFFECT OF YAW JET PRESSURE WITH WING OFF

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PC-JET	RNVL	REFERENCE INFORMATION
(CPH004)	MA-7, UPVT 1031, ROCKWELL PRR DRB, COVF, BTN40	.000	.000	1.000	SREF .7245 SQ. FT.
(CPH001)	MA-7, UPVT 1031, ROCKWELL PRR DRB, COVF, BTN1	.000	.000	1.000	LREF 7.8828 INCHES
(CPH002)	MA-7, UPVT 1031, ROCKWELL PRR DRB, COVF, BTN1	.000	.000	1.000	BREF 15.1152 INCHES
(CPH003)	MA-7, UPVT 1031, ROCKWELL PRR DRB, COVF, BTN1	.000	.000	1.000	XMREF 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP .0150 INCHES
					SCALE



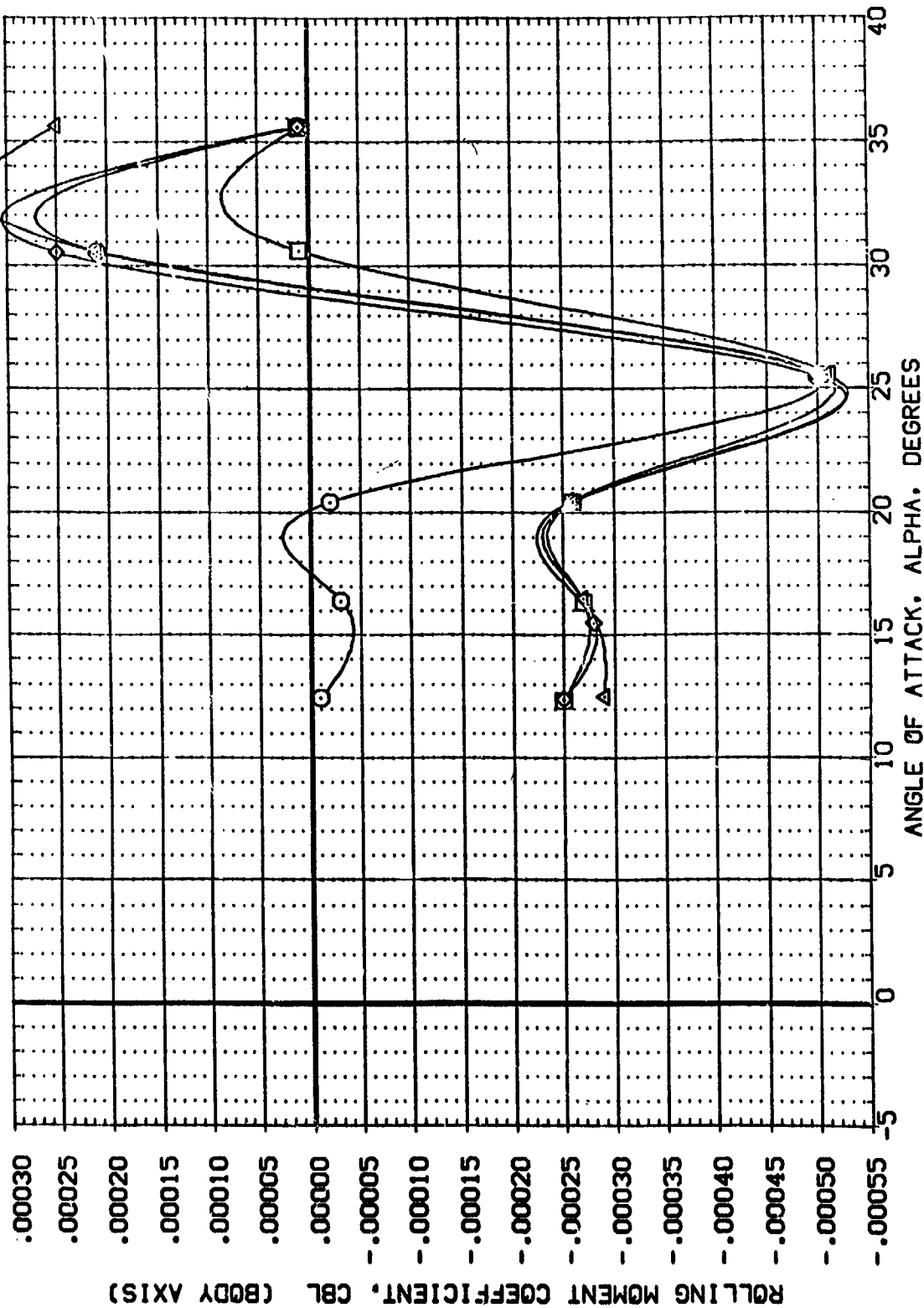
EFFECT OF YAW JET PRESSURE WITH WING OFF

(A) MACH = 4.00



DATA SET SYMBOL      CONFIGURATION DESCRIPTION      BETA      PO-JET      RV/L      REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CPH004)	MA-7, UPVT 1031, ROCKVELL PRR ORB. CONF. BTN40	.000	.000	1.000	SREF 7245 SQ.FT.
(CPH001)	MA-7, UPVT 1031, ROCKVELL PRR ORB. CONF. BTN1	.000	.37.000	1.000	LREF 7.8828 INCHES
(CPH002)	MA-7, UPVT 1031, ROCKVELL PRR ORB. CONF. BTN1	.000	328.000	1.000	BREF 15.1152 INCHES
(CPH003)	MA-7, UPVT 1031, ROCKVELL PRR ORB. CONF. BTN1	.000	600.000	1.000	XREF 12.9510 INCHES
					YREF .0000 INCHES
					ZREF .0150 INCHES
					SCALE

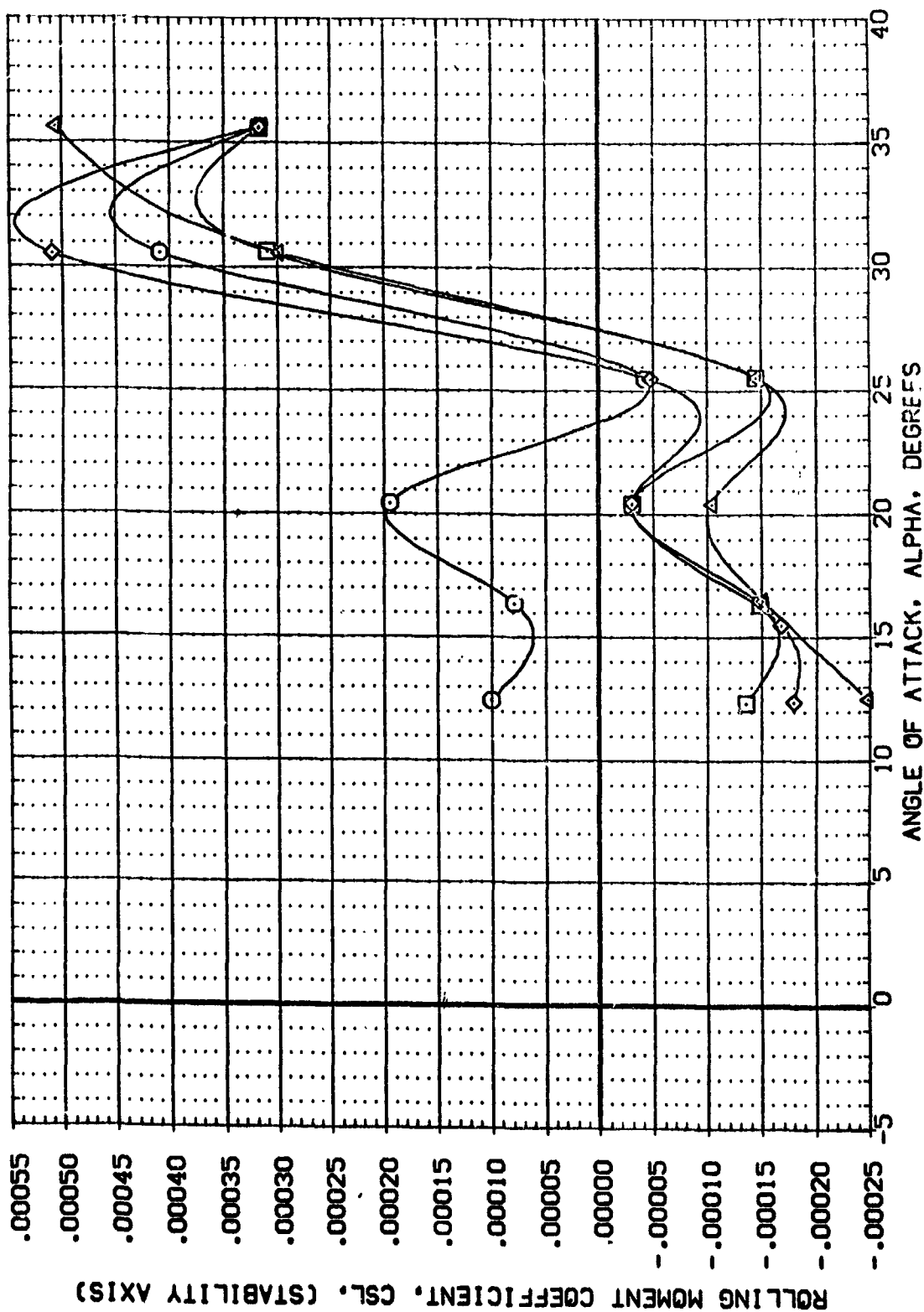


EFFECT OF YAW JET PRESSURE WITH WING OFF

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVL	REFERENCE INFORMATION
(CPH004)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: BTN40	.000	.000	1.000	SREF 7245 SQ.FT.
(CPH001)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: BTN1	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH002)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: BTN1	.000	328.000	1.000	BREF 15.1152 INCHES
(CPH003)	MA-7, UPVT 1031, ROCKWELL PRR 088, CONF: BTN1	.000	600.000	1.000	XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150

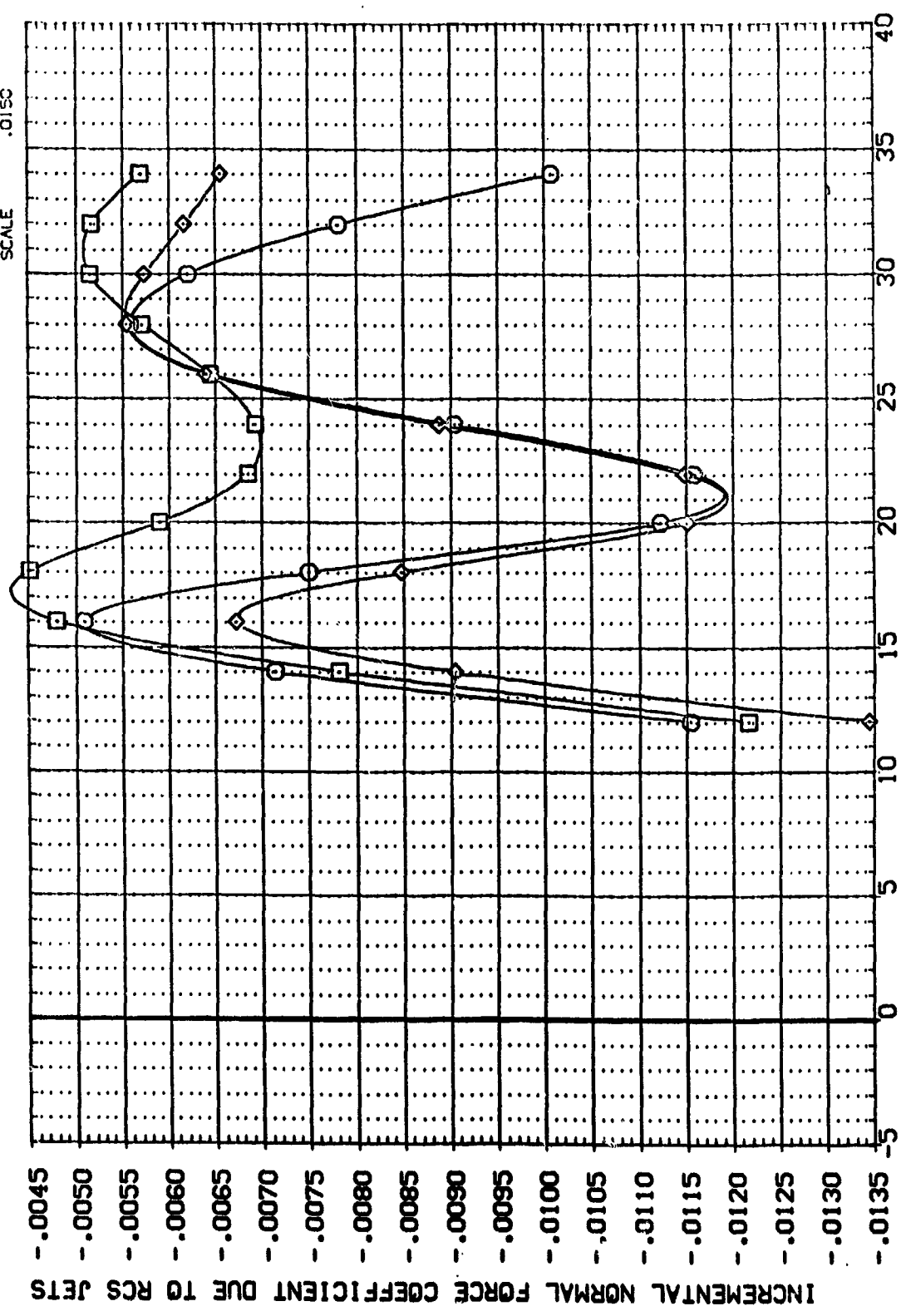


EFFECT OF YAW JET PRESSURE WITH WING OFF

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVL	REFERENCE INFORMATION
(AP001)	MA-7,LPVT 1031,ROCKVELL PRR	.000	37.000	1.000	SREF .7245 SO.FT.
(AP002)	MA-7,LPVT 1031,ROCKVELL PRR	.000	328.000	1.000	LREF 7.8828 INCHES
(AP003)	MA-7,LPVT 1031,ROCKVELL PRR	.000	600.000	1.000	BREF 15.1152 INCHES
					XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150

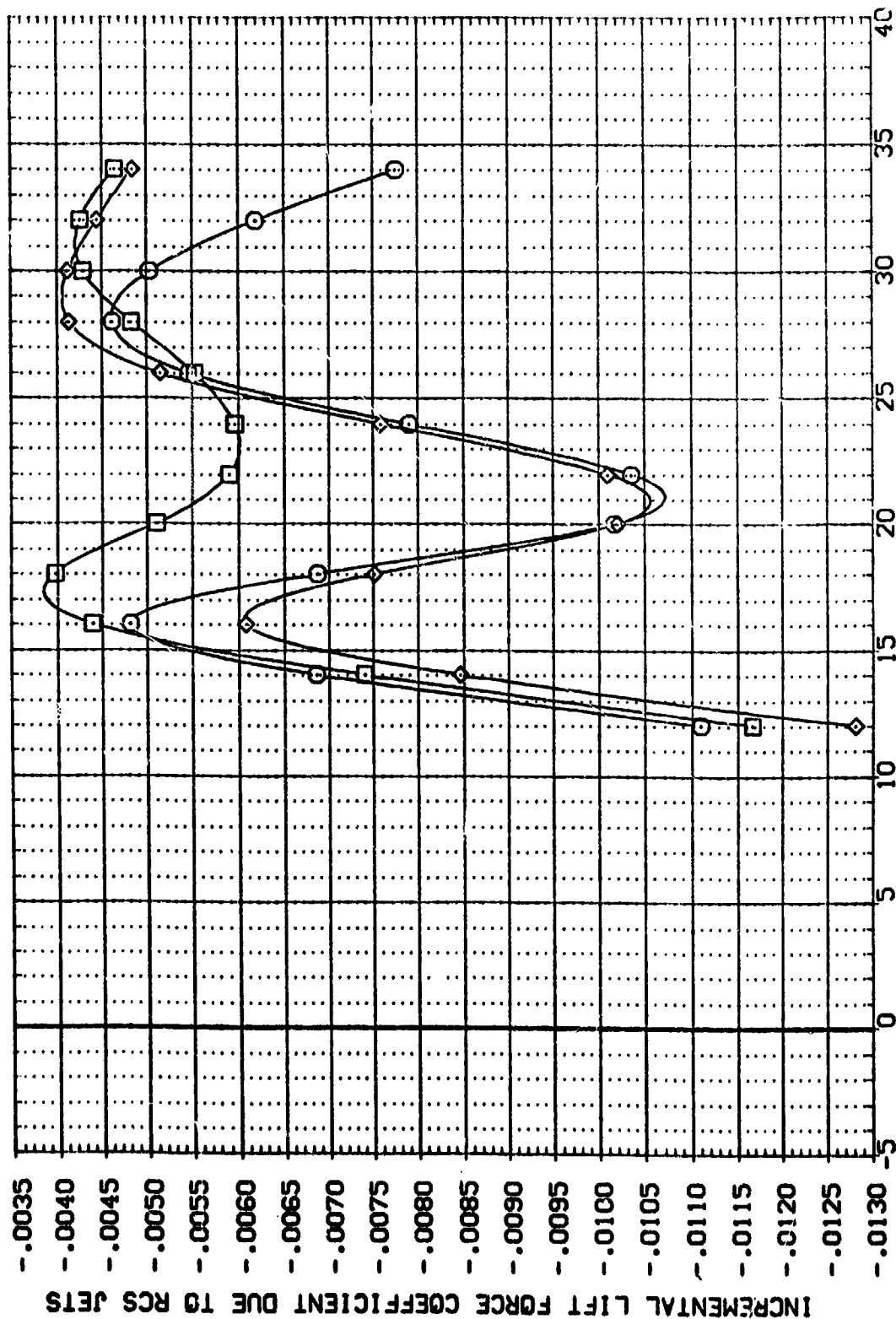


ANGLE OF ATTACK, ALPHA, DEGREES

YAW JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RV/L	REFERENCE INFORMATION
(AP001)	MA-7, UPVT 1031, ROCKWELL PRR QRB, CONF. BTNI	.000	37.000	1.000	SREF 7245 SC.FT.
(AP002)	MA-7, UPVT 1031, ROCKWELL PRR QRB, CONF. BTNI	.000	326.000	1.000	LREF 7.8828 INCHES
(AP003)	MA-7, UPVT 1031, ROCKWELL PRR QRB, CONF. BTNI	.000	600.000	1.000	BREF 15.1152 INCHES
					XMRP 12.9510 INCHES
					YMRP .0000 INCHES
					ZMRP .0000 INCHES
					SCALE .0150

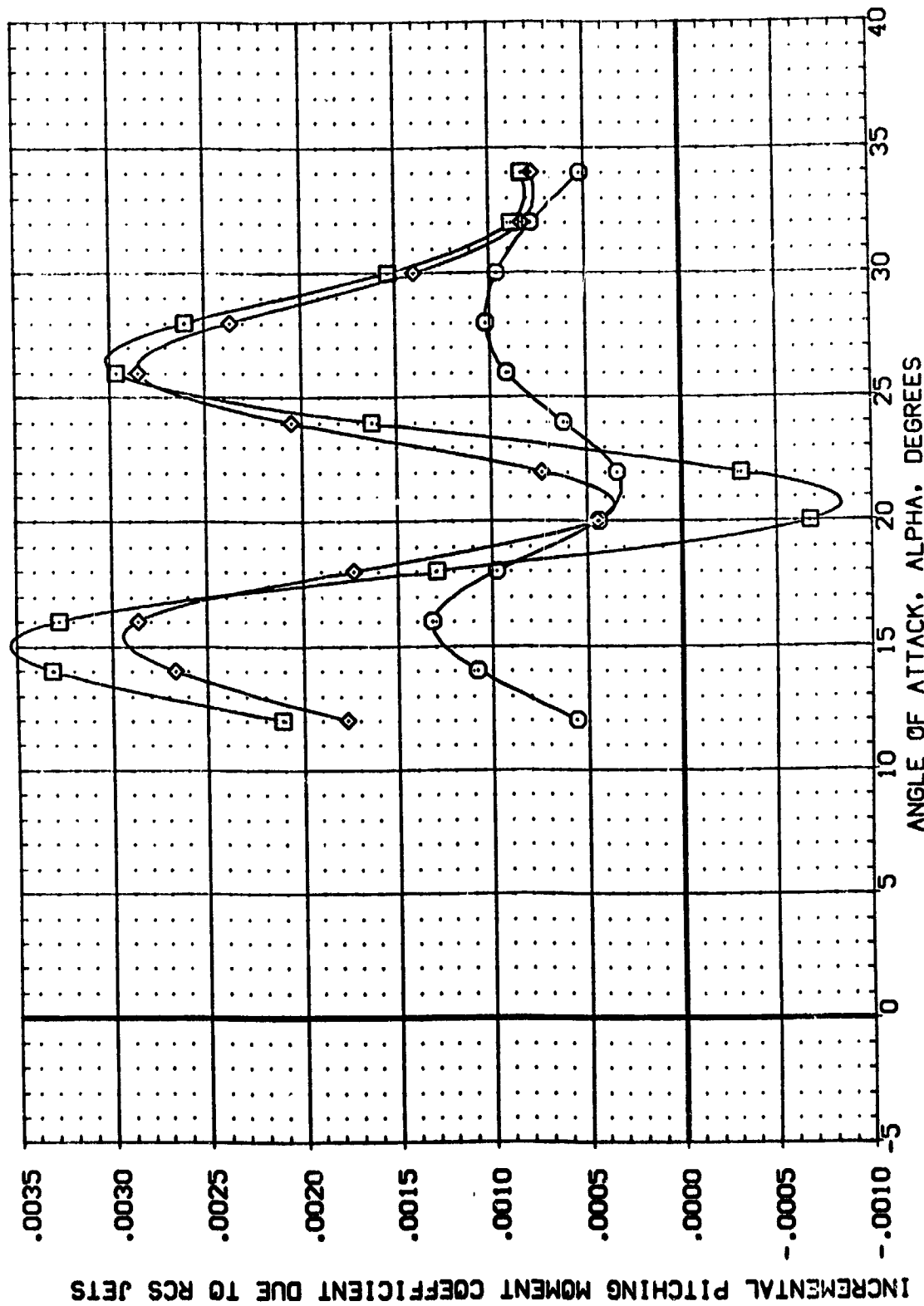


YAW JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00



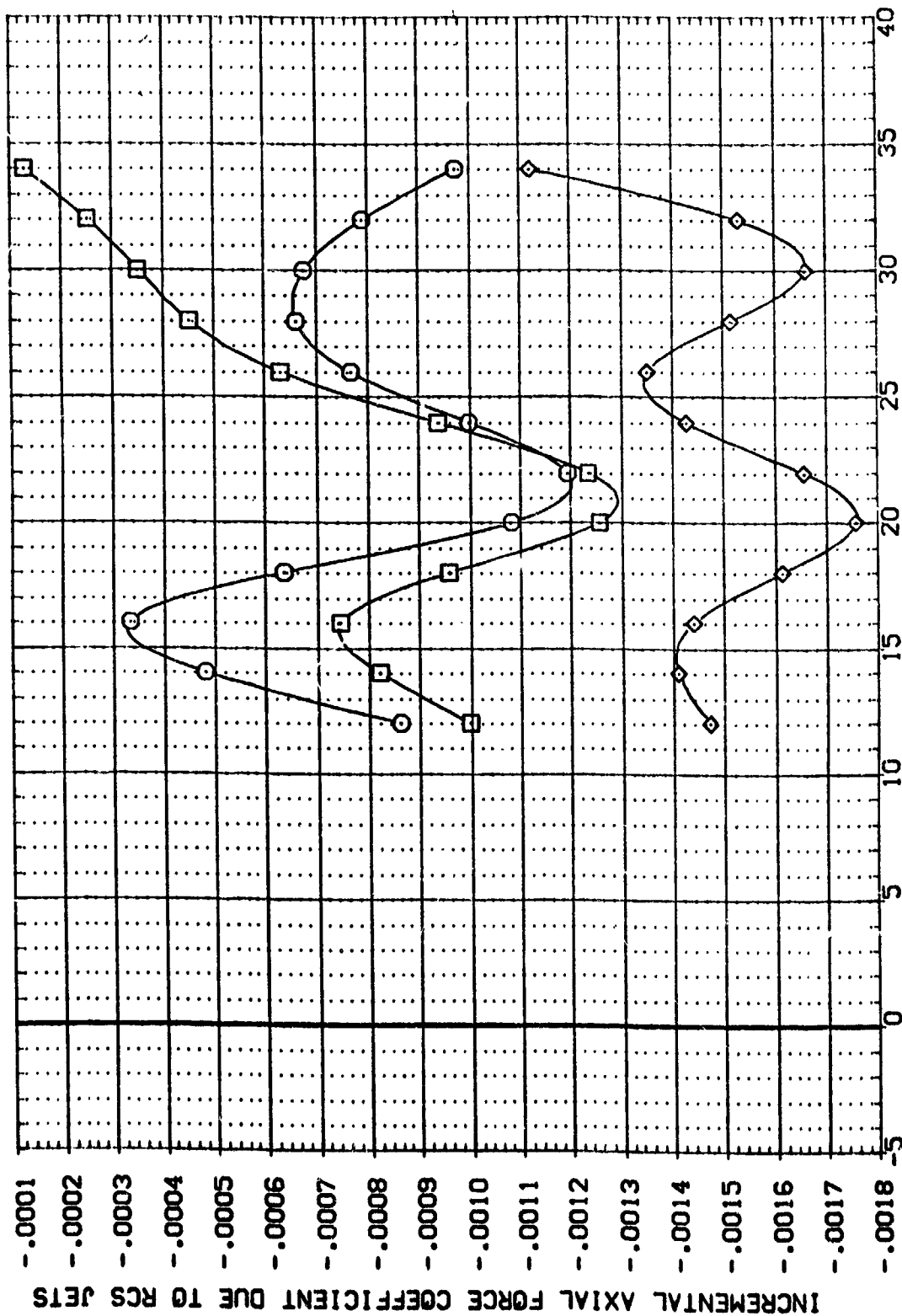
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLP0-J	RN/L	REFERENCE INFORMATION
(APHC001)	MA-7, UPVT 1031, ROCKWELL PRR CR8. CONF. BTNI	.000	37.000	1.000	SREF 7.245 SQ.FT.
(APHC002)	MA-7, UPVT 1031, ROCKWELL PRR CR8. CONF. BTNI	.000	328.000	1.000	LREF 7.8828 INCHES
(APHC003)	MA-7, UPVT 1031, ROCKWELL PRR CR8. CONF. BTNI	.000	600.000	1.000	BREF 15.1152 INCHES
					XREF 12.9510 INCHES
					WREF .0000 INCHES
					ZREF .0150 INCHES
					SCALE



YAW JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	CLP0-J	RVNL	REFERENCE INFORMATION
(AP001)	MA-7:UPVT 1031:ROCKWELL PRR ORB: CONF:	.000	37.000	1.000	SREF 7245 SQ.FT.
(AP002)	MA-7:UPVT 1031:ROCKWELL PRR ORB: CONF:	.000	328.000	1.000	LREF 7.8828 INCHES
(AP003)	MA-7:UPVT 1031:ROCKWELL PRR ORB: CONF:	.000	600.000	1.000	BREF 15.1152 INCHES
					XREF 12.9510 INCHES
					YREF 6.0000 INCHES
					ZREF 6.0000 INCHES
					SCALE 0.50



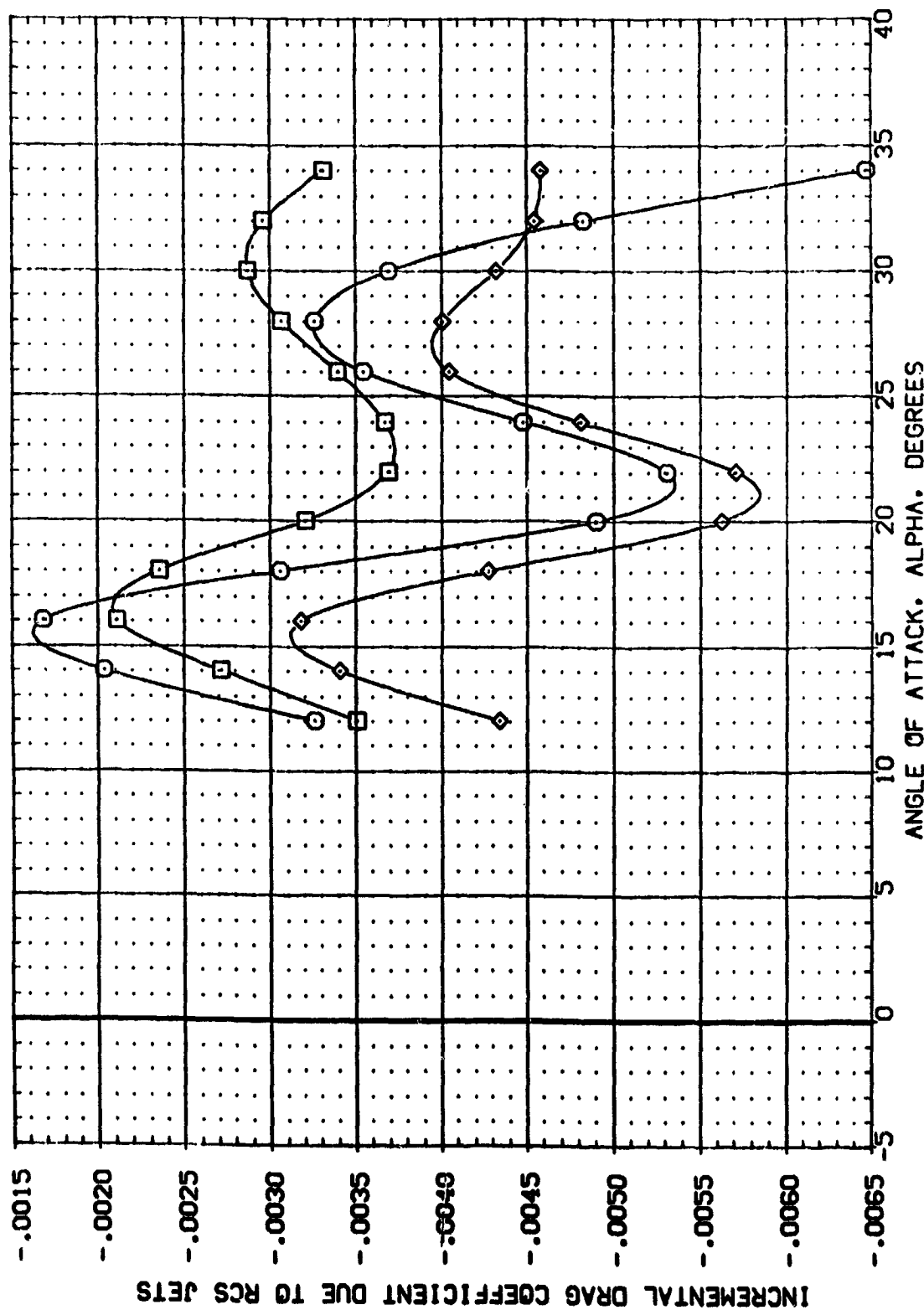
ANGLE OF ATTACK, ALPHA, DEGREES

YAW JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00

DATA SET SYMBOL      CONFIGURATION DESCRIPTION      BETA      DLPO-J      RN/L      REFERENCE INFORMATION

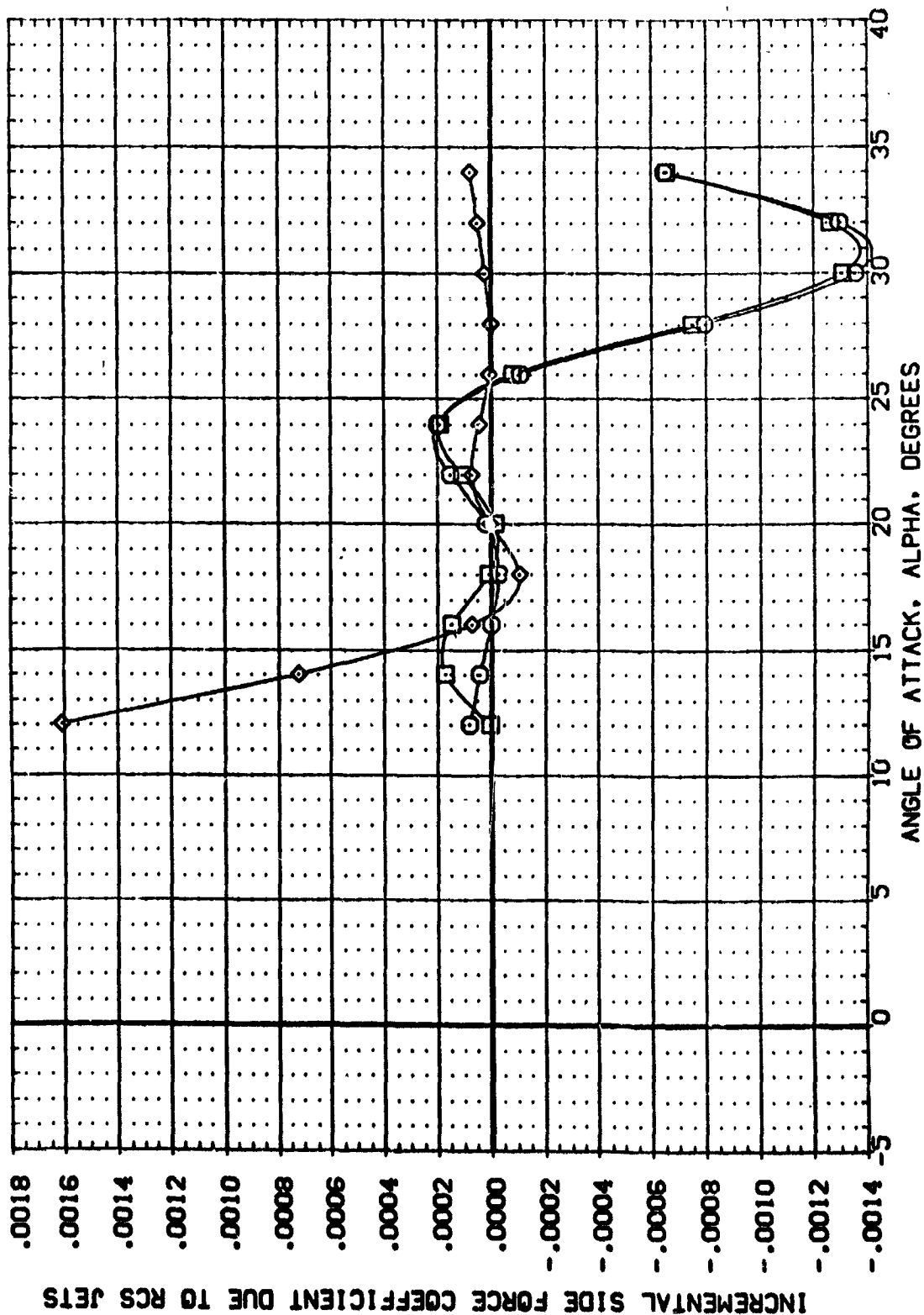
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(APMOD1)	MA-7.1PVT 1031. ROCKWELL PRR ORB. CONF. BTNI	.000	37.000	1.000	SREF 7.7245 SQ.FT.
(APMOD2)	MA-7.1PVT 1031. ROCKWELL PRR ORB. CONF. BTNI	.000	328.000	1.000	LREF 7.8928 INCHES
(APMOD3)	MA-7.1PVT 1031. ROCKWELL PRR ORB. CONF. BTNI	.000	600.000	1.000	BREF 15.1152 INCHES
					XREF 12.9510 INCHES
					YREF .0000 INCHES
					ZREF 6.0000 INCHES
					SCALE .0150



YAW JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RNVL	REFERENCE INFORMATION
(AP001)	MA-7,LPVT 1031,ROCKWELL PRR ORB. CONF. BTNI	.000	37.000	1.000	SREF .7245 50.FT.
(AP002)	MA-7,LPVT 1031,ROCKWELL PRR ORB. CONF. BTNI	.000	328.000	1.000	LREF 7.8828 INCHES
(AP003)	MA-7,LPVT 1031,ROCKWELL PRR ORB. CONF. BTNI	.000	600.000	1.000	BREF 15.1152 INCHES
					YMRP 12.9510 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



YAW JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00

DATA SET SYMBOL: (AP001) (AP002) (AP003)

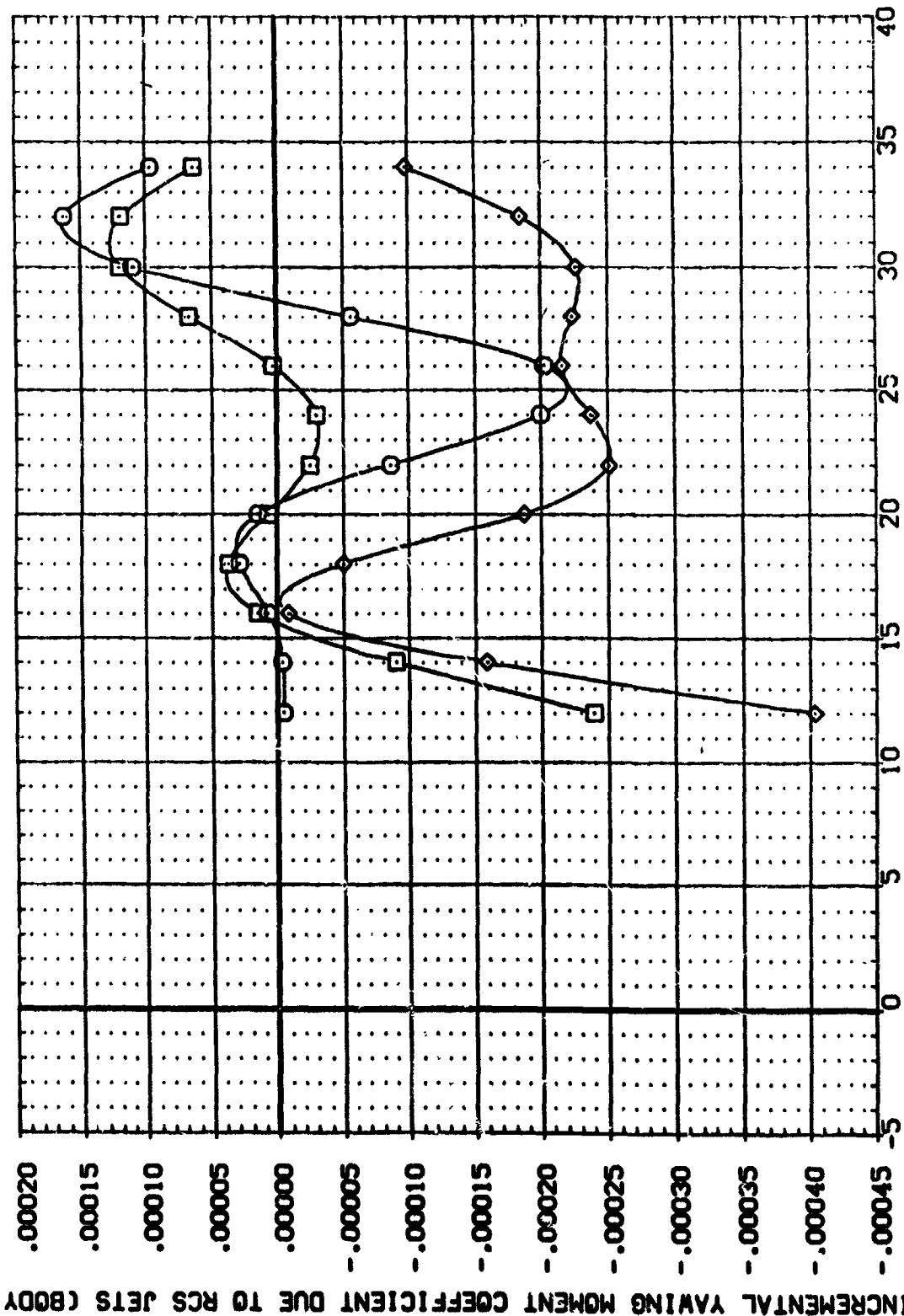
CONFIGURATION DESCRIPTION: MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF: BTNI BTNI BTNI

BETA: .000 .000 .000

DLPO-J: 37.000 328.000 600.000

RN/L: 1.000 1.000 1.000

REFERENCE INFORMATION: SREF: 7245 50.FT. LREF: 7.8828 INCHES BREF: 15.1152 INCHES XMRP: 12.9510 INCHES YMRP: .0000 INCHES ZMRP: 6.0000 INCHES SCALE: .0150



YAW JET INTERFERENCE WITH JING OFF (INCREMENTAL DATA)

(A)MACH = 4.00



DATA SET SYMBOL  
(AP001)  
(AP002)  
(AP003)

CONFIGURATION DESCRIPTION  
MA-7.1PVT 1031.ROOVELL PRR 008. CONF.  
MA-7.1PVT 1031.ROOVELL PRR 008. CONF.  
MA-7.1PVT 1031.ROOVELL PRR 008. CONF.

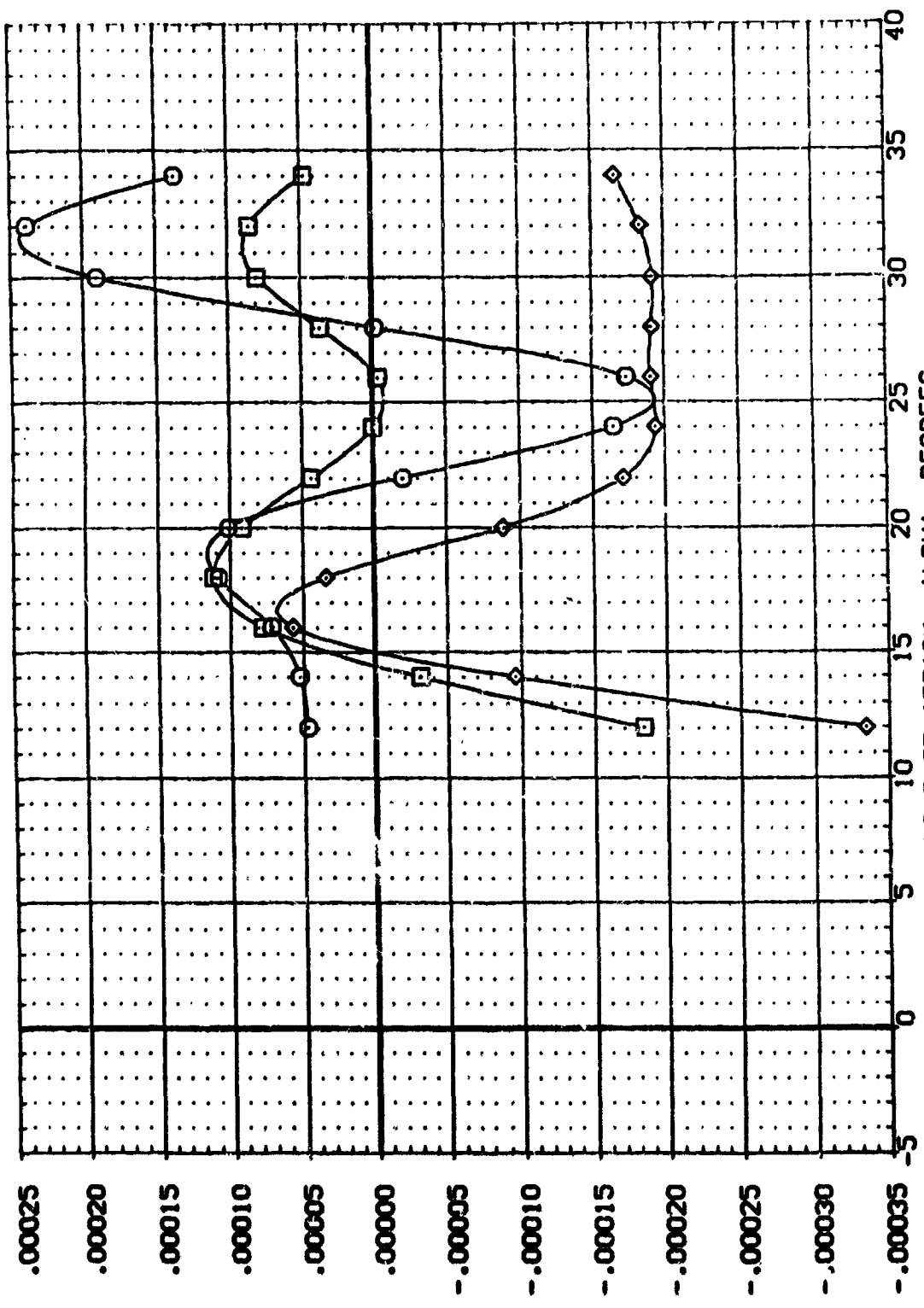
BETA  
0.000  
0.000  
0.000

DLPO-J  
37.000  
328.000  
600.000

RMVL  
1.000  
1.000  
1.000

REFERENCE INFORMATION  
SREF .7245 SQ.FT.  
LREF 7.8828 INCHES  
BREF 15.1152 INCHES  
XMRP 12.5510 INCHES  
YMRP .0000 INCHES  
ZMRP 6.0000 INCHES  
SCALE .0150

INCREMENTAL YAWING MOMENT COEFFICIENT DUE TO RCS JETS (STABILITY AXIS)



YAW JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

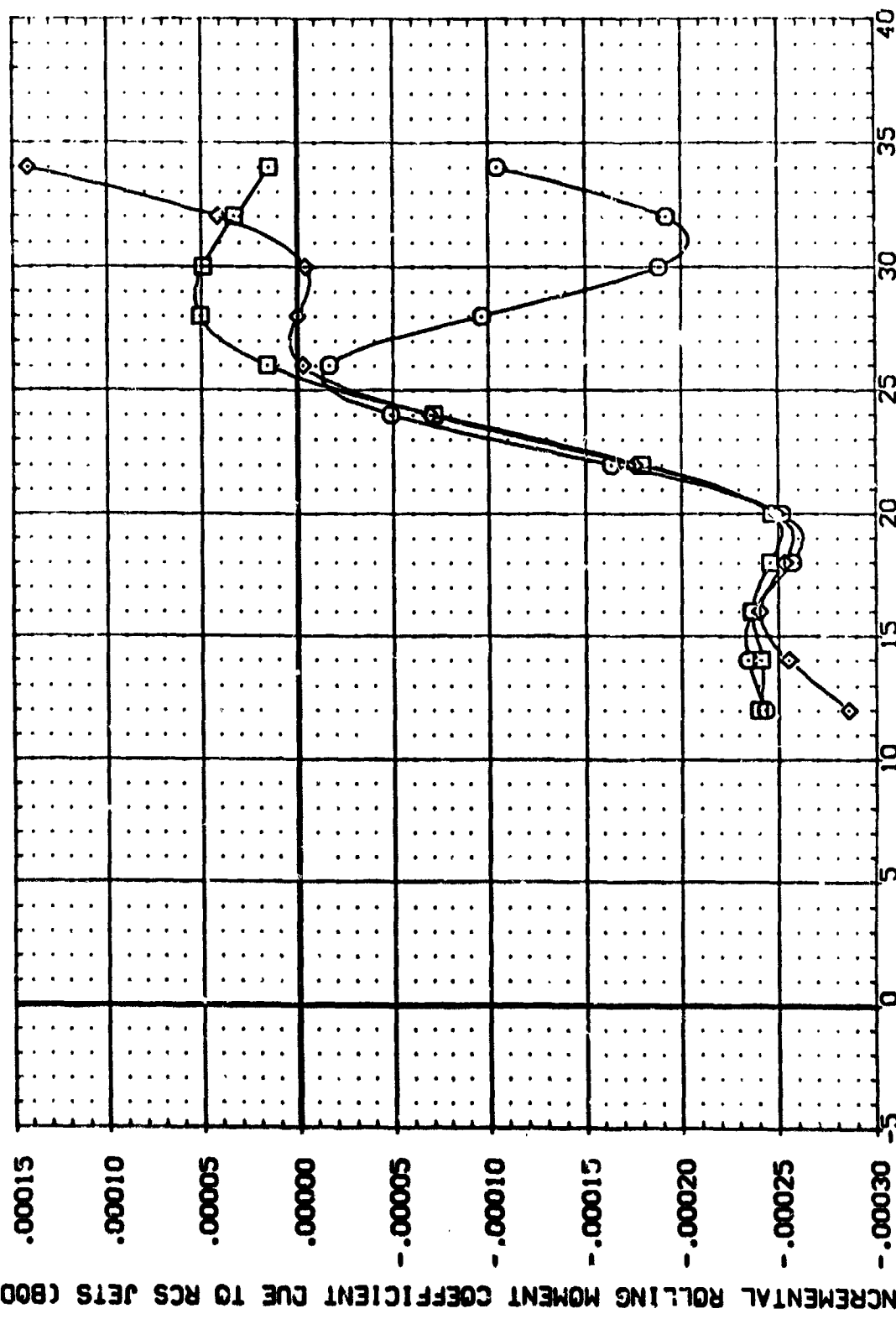
(A)MACH = 4.00

DATA SET SYMBL. CONFIGURATION DESCRIPTION

DATA SET SYMBL.	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVL
(APHD01)	MA-7-LPVT (Q31-ROCKWELL PRR ORB. CDF.	.000	37.000	1.000
(APHD02)	MA-7-LPVT (Q31-ROCKWELL PRR ORB. CDF.	.000	328.000	1.000
(APHD03)	MA-7-LPVT (Q31-ROCKWELL PRR ORB. CDF.	.000	600.000	1.000

REFERENCE INFORMATION

REFERENCE INFORMATION	VALUE	UNIT
SREF	.7245	SO. FT.
LREF	7.8828	INCHES
BREF	15.1152	INCHES
XPRP	12.9510	INCHES
YPRP	6.0000	INCHES
ZPRP	6.0000	INCHES
SCALE	.0150	



YAW JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00

REFERENCE INFORMATION  
 SREF .7245 50. FT.  
 LREF 7.8828 INCHES  
 XREF 15.1152 INCHES  
 YREF 12.9510 INCHES  
 ZREF .0000 INCHES  
 SCALE 6.0000 INCHES  
 .0150

BETA DLPO-J RV/L  
 .000 37.000 1.000  
 .000 328.000 1.000  
 .000 600.000 1.000

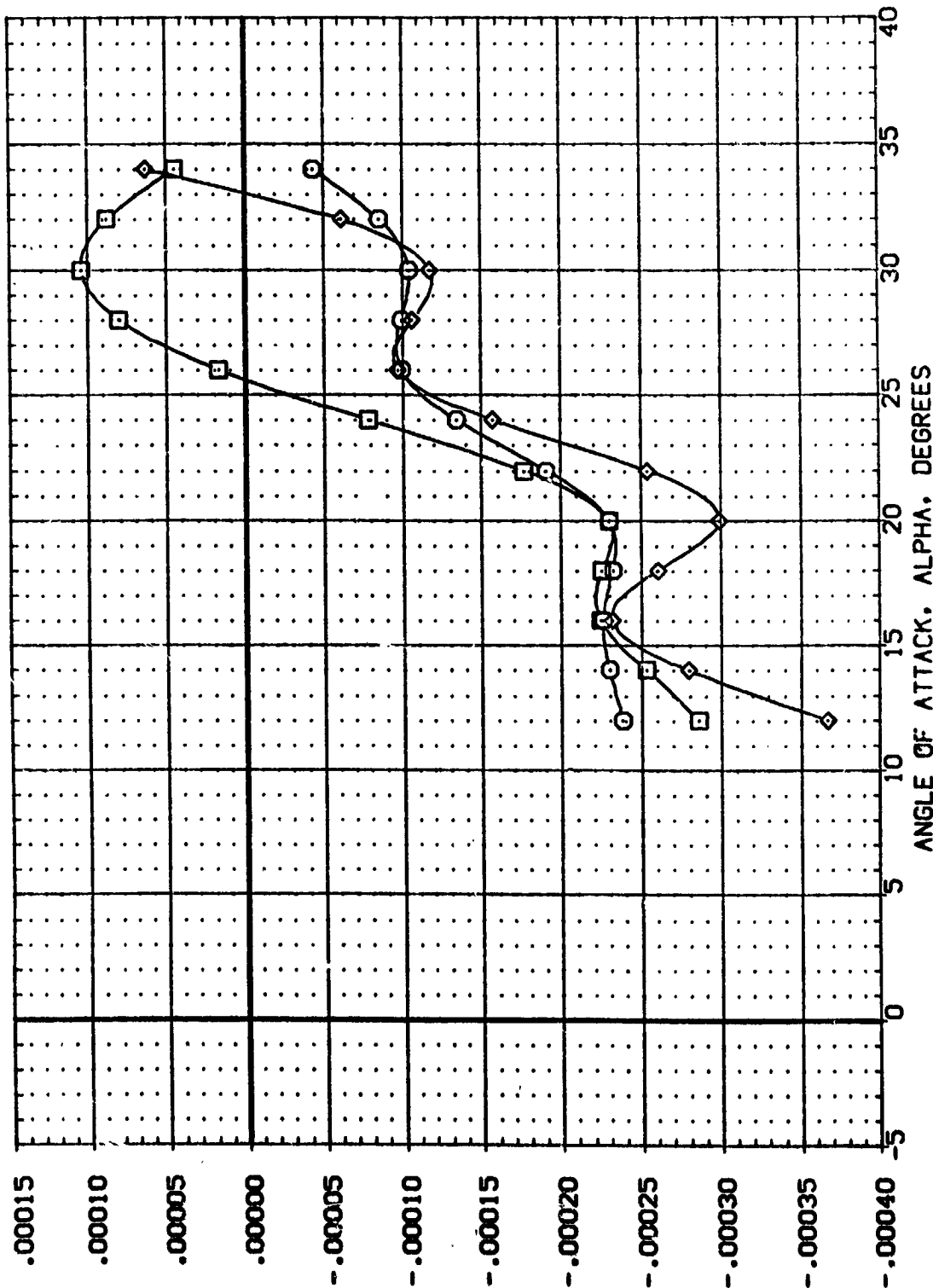
BTNI  
 BTNI  
 BTNI

CONF. CONF.  
 CONF. CONF.  
 CONF. CONF.

CONFIGURATION DESCRIPTION  
 MA-7. UPVT 1031. ROCKWELL PRS  
 MA-7. UPVT 1031. ROCKWELL PRS  
 MA-7. UPVT 1031. ROCKWELL PRS

DATA SET SYMBOL  
 (APM001)  
 (APM002)  
 (APM003)

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS STABILITY AXIS

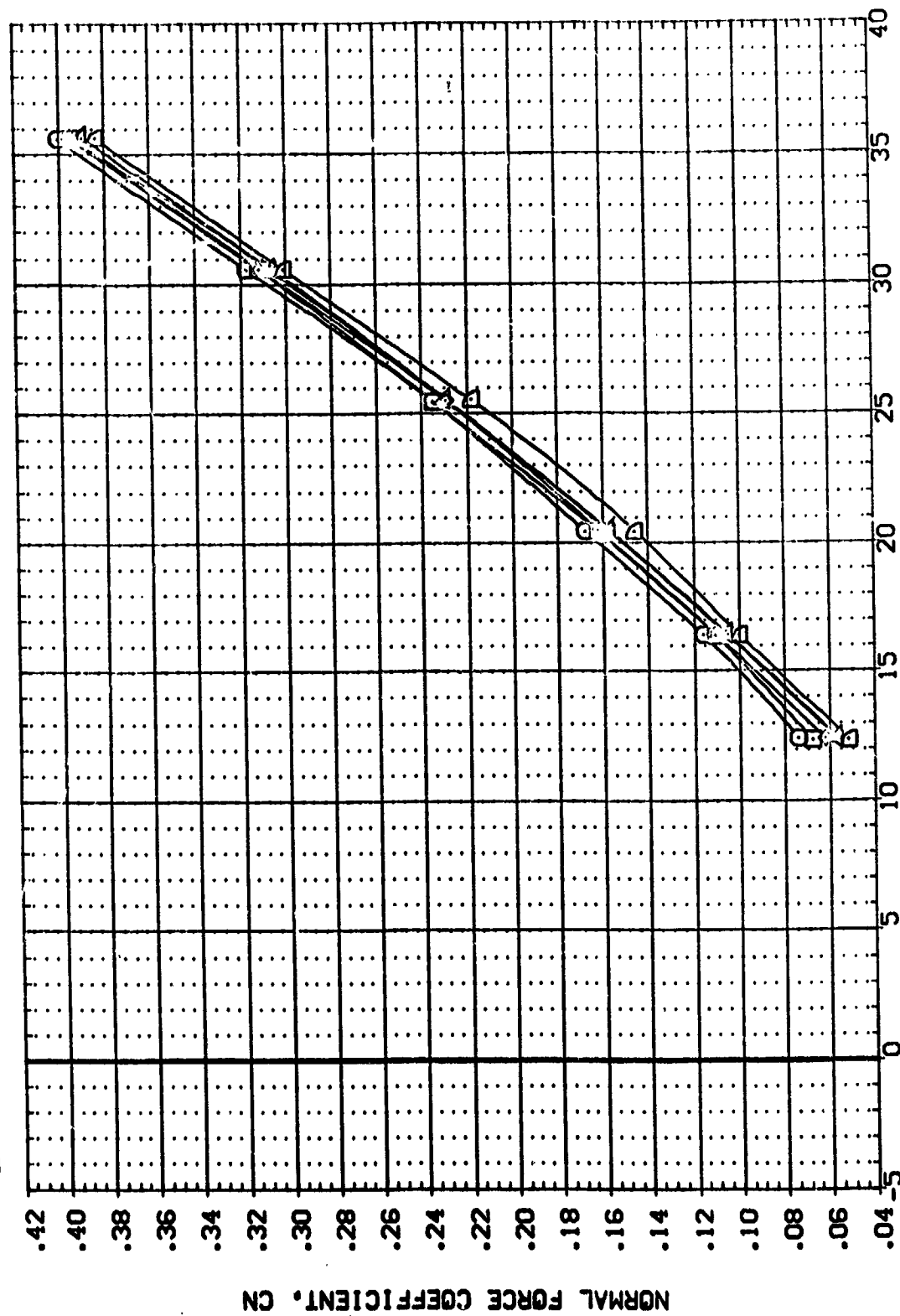


YAW JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RN/L	REFERENCE INFORMATION
(CPH004)	MA-7, LPVT 1031, ROCKWELL PRR 0RB.	.000	.000	1.000	SREF 7245 SQ. FT.
(CPH005)	MA-7, LPVT 1031, ROCKWELL PRR 0RB.	.000	37.000	1.000	LREF 7.8928 INCHES
(CPH006)	MA-7, LPVT 1031, ROCKWELL PRR 0RB.	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH007)	MA-7, LPVT 1031, ROCKWELL PRR 0RB.	.000	199.000	1.000	XMRP 12.9510 INCHES
(CPH008)	MA-7, LPVT 1031, ROCKWELL PRR 0RB.	.000	328.000	1.000	YMRP .0000 INCHES
(CPH009)	MA-7, LPVT 1031, ROCKWELL PRR 0RB.	.000	500.000	1.000	ZMRP 6.0000 INCHES
					SCALE .0150

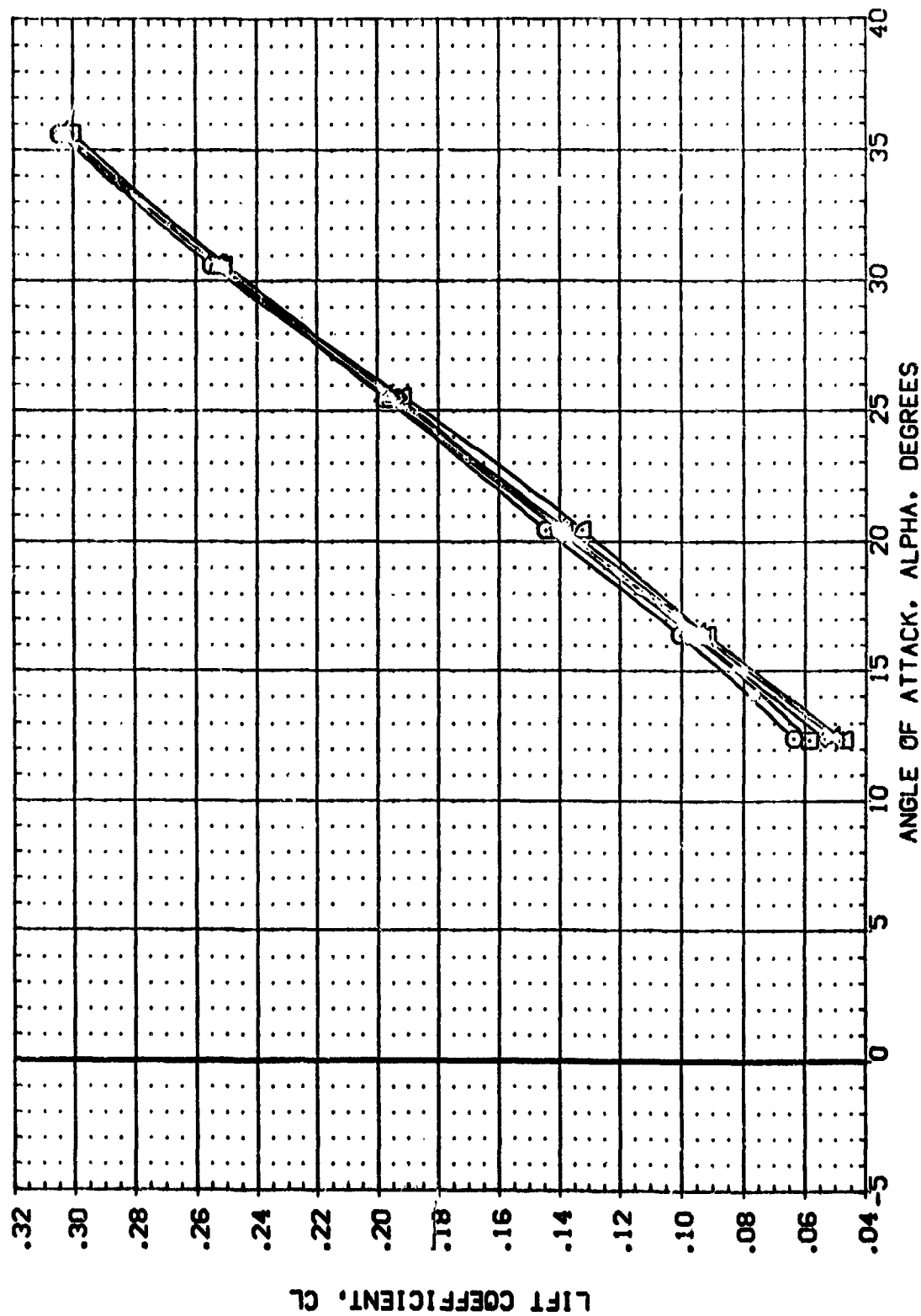


ANGLE OF ATTACK, ALPHA, DEGREES

EFFECT OF DOWNWARD FIRING ROLL JET WITH WING OFF

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVAL	REFERENCE INFORMATION
(CPH004)	MA-7, UPVT 1031, ROCKWELL PRR C88.	.000	.000	1.000	SREF .7245 SO. FT.
(CPH005)	MA-7, UPVT 1031, ROCKWELL PRR C88.	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH006)	MA-7, UPVT 1031, ROCKWELL PRR C88.	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH007)	MA-7, UPVT 1031, ROCKWELL PRR C88.	.000	199.000	1.000	YMRP 12.9510 INCHES
(CPH008)	MA-7, UPVT 1031, ROCKWELL PRR C88.	.000	328.000	1.000	ZMRP .0000 INCHES
(CPH009)	MA-7, UPVT 1031, ROCKWELL PRR C88.	.000	600.000	1.000	ZMRP 6.0000 INCHES
					SCALE .0150

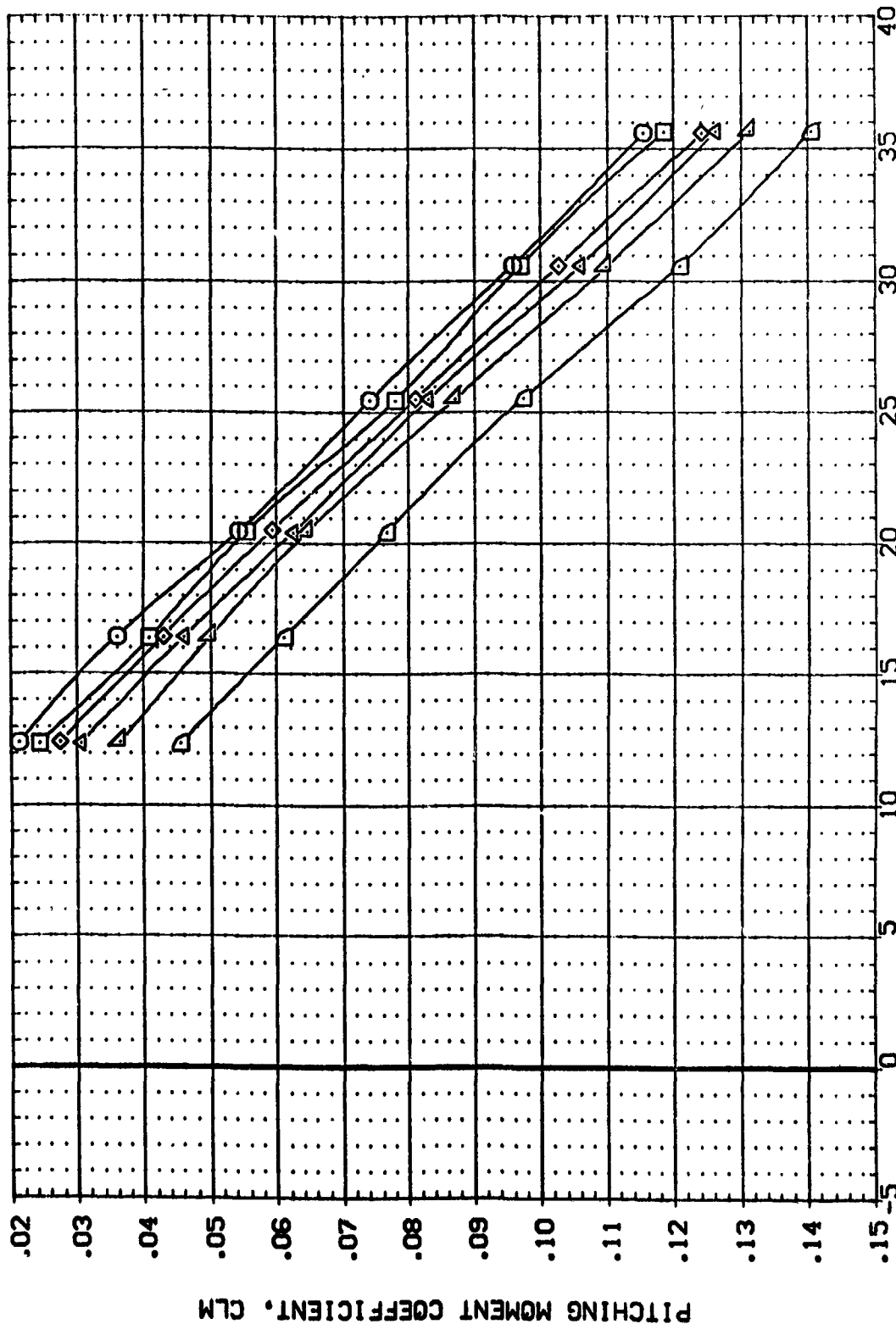


EFFECT OF DOWNWARD FIRING ROLL JET WITH WING OFF

(A)MACH = 4.00

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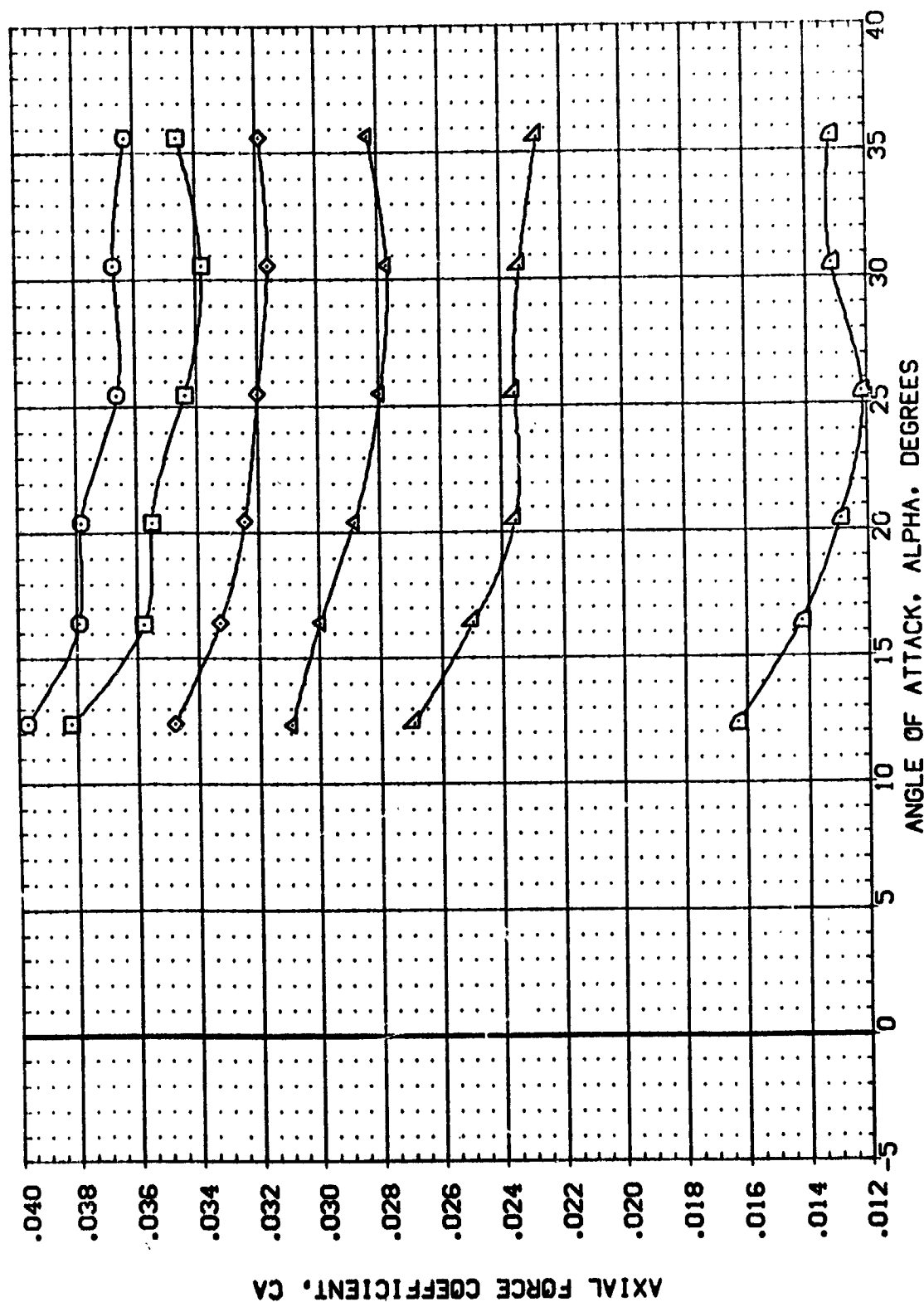
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RV/L	REFERENCE INFORMATION
(CP0004)	MA-7, UPVT 1031, ROCKWELL PRR DB8	.000	.000	1.000	SREF .7245 SQ.FT.
(CP0005)	MA-7, UPVT 1031, ROCKWELL PRR DB8	.000	37.000	1.000	LREF 7.8828 INCHES
(CP0006)	MA-7, UPVT 1031, ROCKWELL PRR DB8	.000	100.000	1.000	BREF 15.1152 INCHES
(CP0007)	MA-7, UPVT 1031, ROCKWELL PRR DB8	.000	199.000	1.000	YMRP 12.9510 INCHES
(CP0008)	MA-7, UPVT 1031, ROCKWELL PRR DB8	.000	328.000	1.000	ZMRP 6.0000 INCHES
(CP0009)	MA-7, UPVT 1031, ROCKWELL PRR DB8	.000	600.000	1.000	SCALE .0150



EFFECT OF DOWNWARD FIRING ROLL JET WITH WING OFF

(A)MACH = 4.00

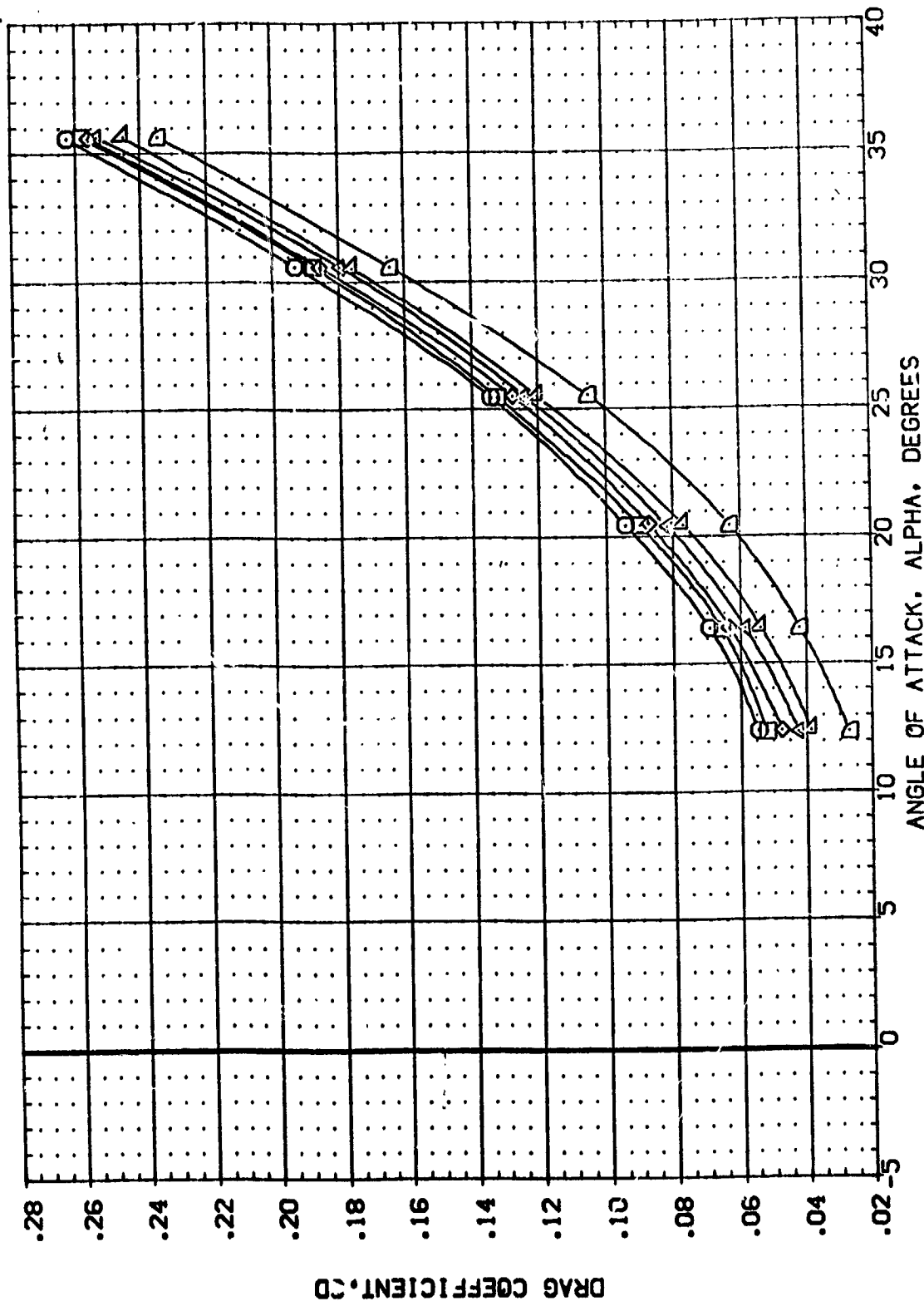
DATA SET SYMBOL	CONF:GURATION DESCRIPTION	BETA	PG-JET	RVL	REFERENCE INFORMATION
(CPH004)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF. BTN40	.000	.000	1.000	SREF .7245 SQ.FT.
(CPH005)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF. BTN40	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH006)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF. BTN40	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH007)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF. BTN40	.000	199.000	1.000	XREF 12.9510 INCHES
(CPH008)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF. BTN40	.000	328.000	1.000	YREF .0000 INCHES
(CPH009)	MA-7,UPVT 1031,ROCKWELL PRR ORB. CONF. BTN40	.000	600.000	1.000	ZREF .0150 INCHES



EFFECT OF DOWNWARD FIRING ROLL JET WITH WING OFF

(A)MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CPM004)	MA-7,UPVT 1031,ROCKWELL PRR ORB,CONF, BTN40	.000	.000	1.000	SREF 7.245 SQ.FT.
(CPM005)	MA-7,UPVT 1031,ROCKWELL PRR ORB,CONF, BTN40	.000	37.000	1.000	LREF 7.8828 INCHES
(CPM006)	MA-7,UPVT 1031,ROCKWELL PRR ORB,CONF, BTN40	.000	100.000	1.000	BREF 15.1152 INCHES
(CPM007)	MA-7,UPVT 1031,ROCKWELL PRR ORB,CONF, BTN40	.000	199.000	1.000	XGRP 12.9510 INCHES
(CPM008)	MA-7,UPVT 1031,ROCKWELL PRR ORB,CONF, BTN40	.000	328.000	1.000	YGRP .0000 INCHES
(CPM009)	MA-7,UPVT 1031,ROCKWELL PRR ORB,CONF, BTN40	.000	600.000	1.000	ZGRP 6.0000 INCHES
					SCALE .0150

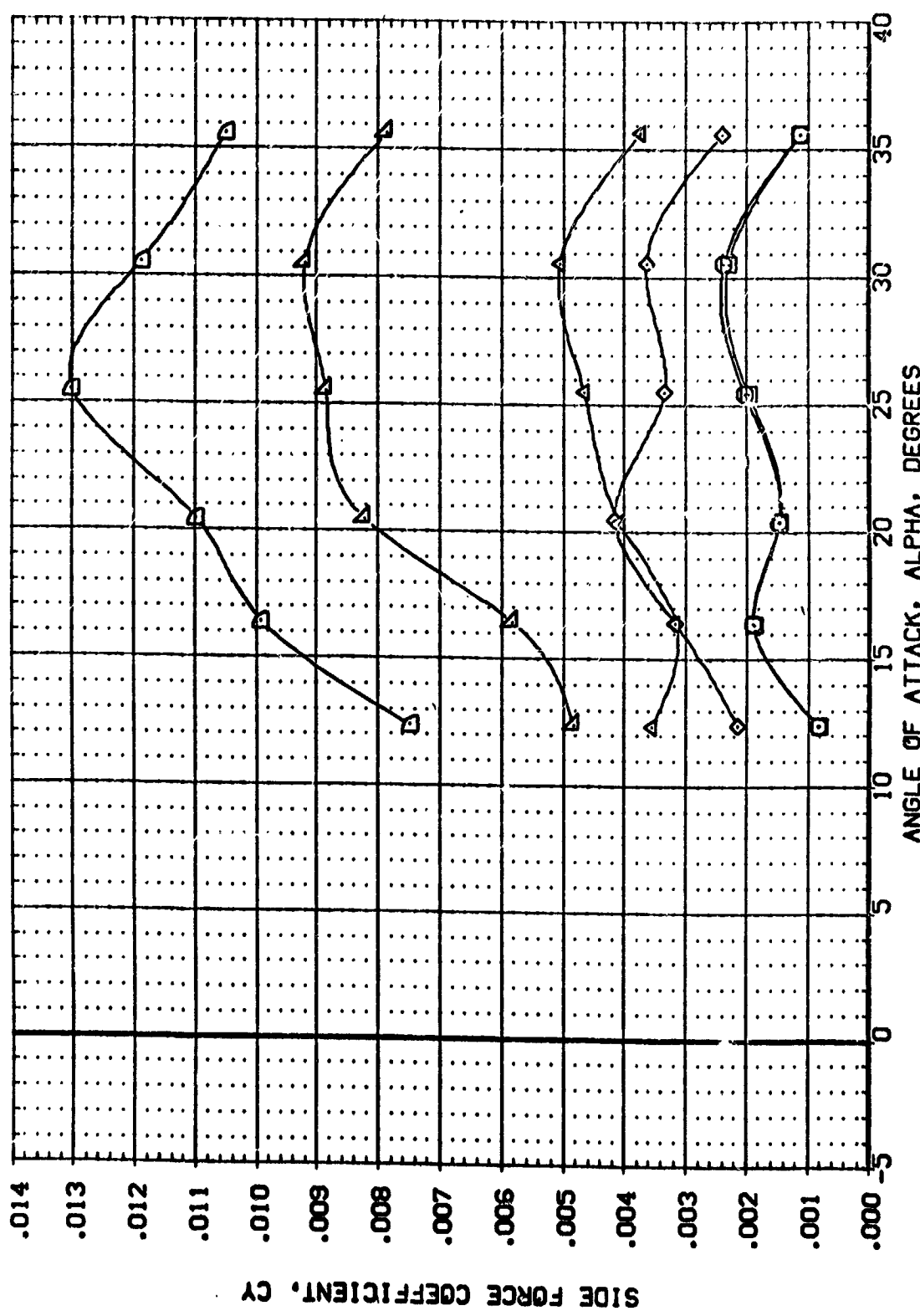


EFFECT OF DOWNWARD FIRING ROLL JET WITH WING OFF

(A)MACH = 4.00



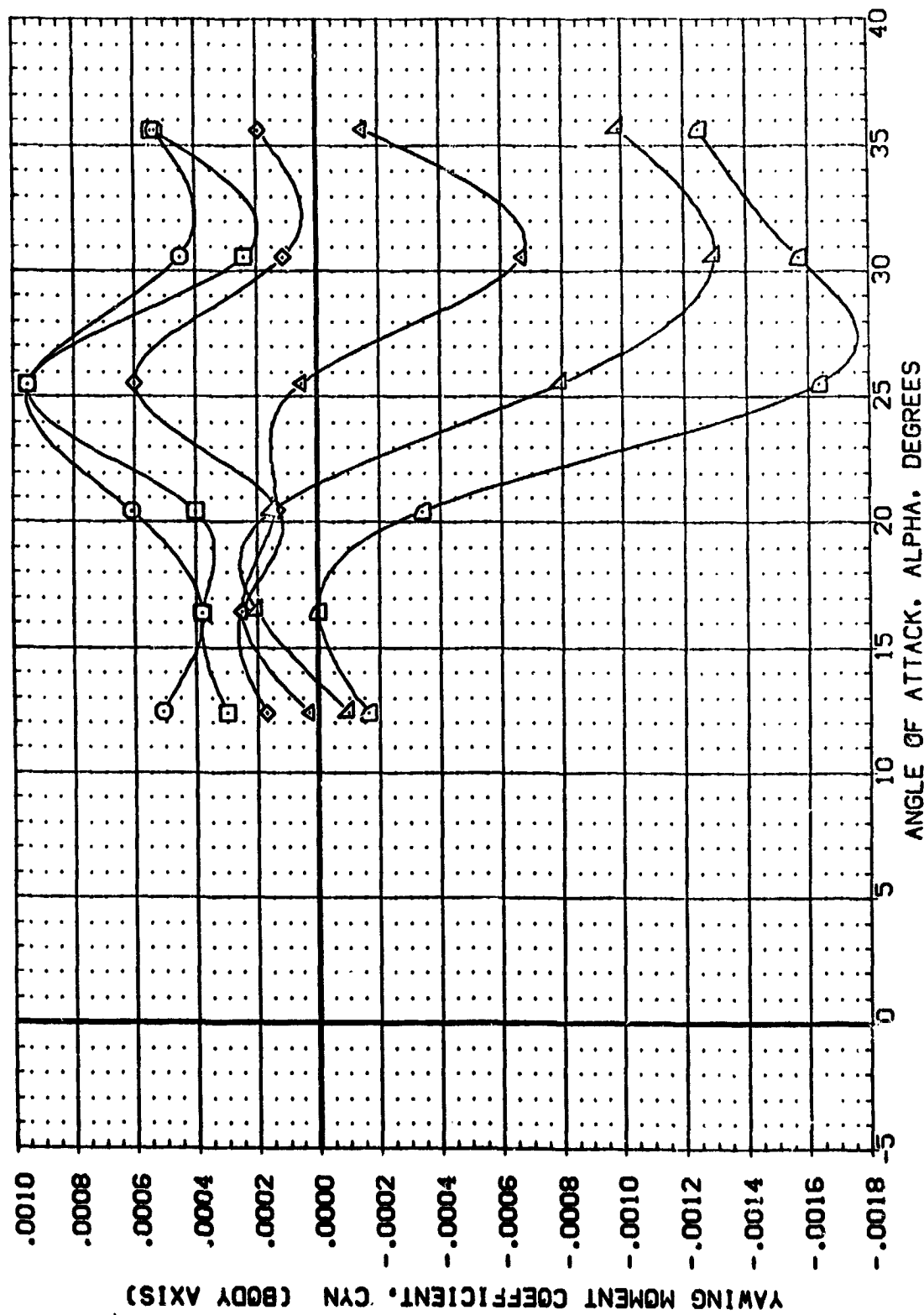
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-JET	RV/L	REFERENCE INFORMATION
(CPH004)	MA-7, UPVT 1031, ROCKVELL PRR ORB, CONF.	.000	.000	1.000	SREF 7.245 SO.FT.
(CPH005)	MA-7, UPVT 1031, ROCKVELL PRR ORB, CONF.	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH006)	MA-7, UPVT 1031, ROCKVELL PRR ORB, CONF.	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH007)	MA-7, UPVT 1031, ROCKVELL PRR ORB, CONF.	.000	199.000	1.000	XMRP 12.9510 INCHES
(CPH008)	MA-7, UPVT 1031, ROCKVELL PRR ORB, CONF.	.000	328.000	1.000	YMRP .0000 INCHES
(CPH009)	MA-7, UPVT 1031, ROCKVELL PRR ORB, CONF.	.000	600.000	1.000	ZMRP 6.0000 INCHES
					SCALE .0150



EFFECT OF DOWNWARD FIRING ROLL JET WITH WING OFF

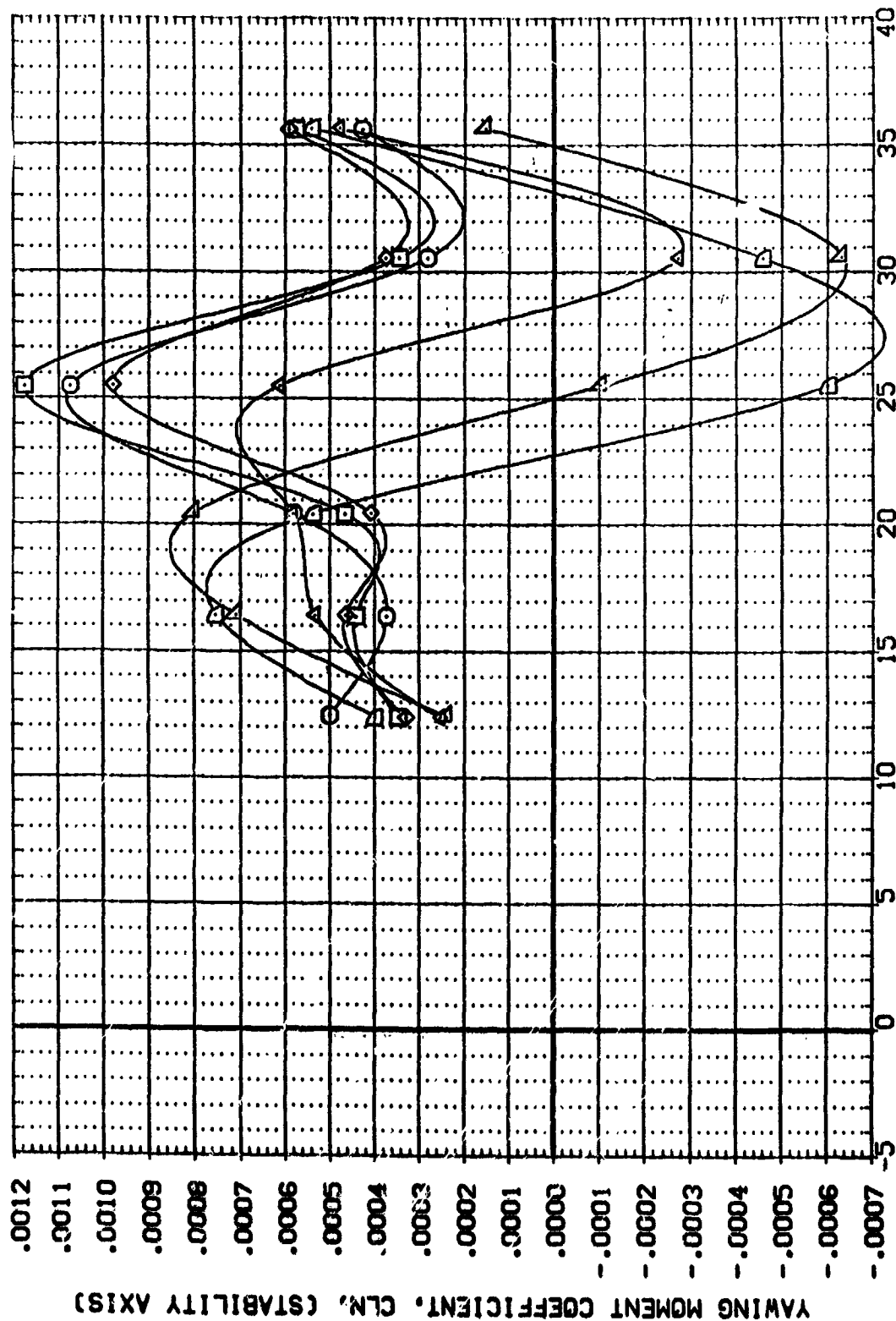
(MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RV/L	REFERENCE INFORMATION
(CPH004)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BTN40	.000	.000	1.000	SREF .7245 SO.FT.
(CPH005)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BTN40	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH006)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BTN40	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH007)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BTN40	.000	199.000	1.000	XREF 12.9510 INCHES
(CPH008)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BTN40	.000	328.000	1.000	YREF 6.0000 INCHES
(CPH009)	MA-7-UPVT 1031-ROCKWELL PRR CR8. CONF. BTN40	.000	600.000	1.000	ZREF 6.0000 INCHES
					SCALE .0150



EFFECT OF DOWNWARD FIRING ROLL JET WITH WING OFF

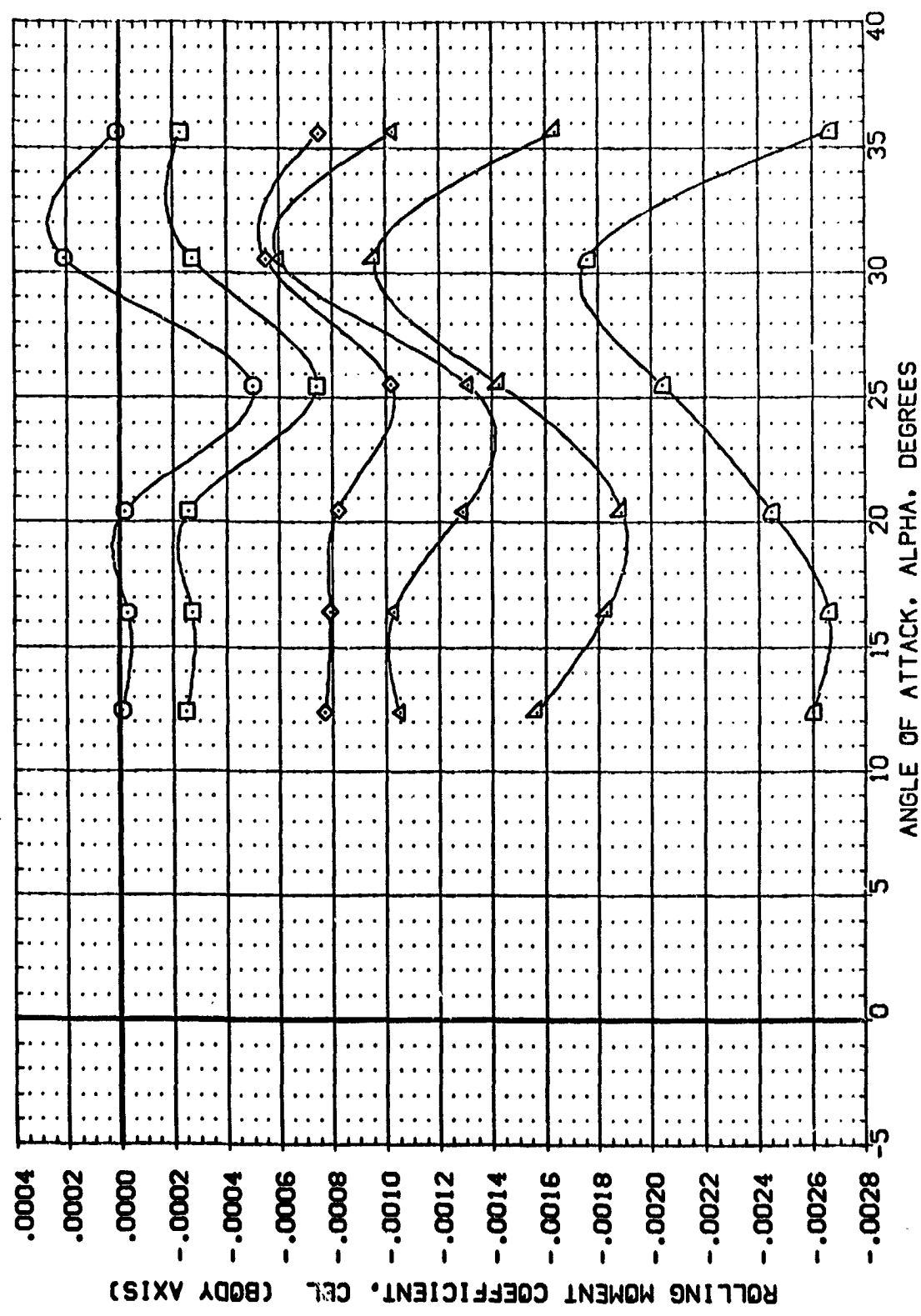
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PG-11ET	RN/L	REFERENCE INFORMATION
(CPH004)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BTN40	.000	.000	1.000	SREF 7.245 SQ.FT.
(CPH005)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BTN40	.000	37.000	1.000	LREF 7.8828 INCHES
(CPH006)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BTN40	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH007)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BTN40	.000	199.000	1.000	XMRP 12.9510 INCHES
(CPH008)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BTN40	.000	328.000	1.000	ZMRP 6.0000 INCHES
(CPH009)	MA-7-UPVT 1031-ROCKWELL PRR CRB. CONF. BTN40	.000	600.000	1.000	SCALE .0150



EFFECT OF DOWNWARD FIRING ROLL JET WITH WING OFF

(A)MACH = 4.00

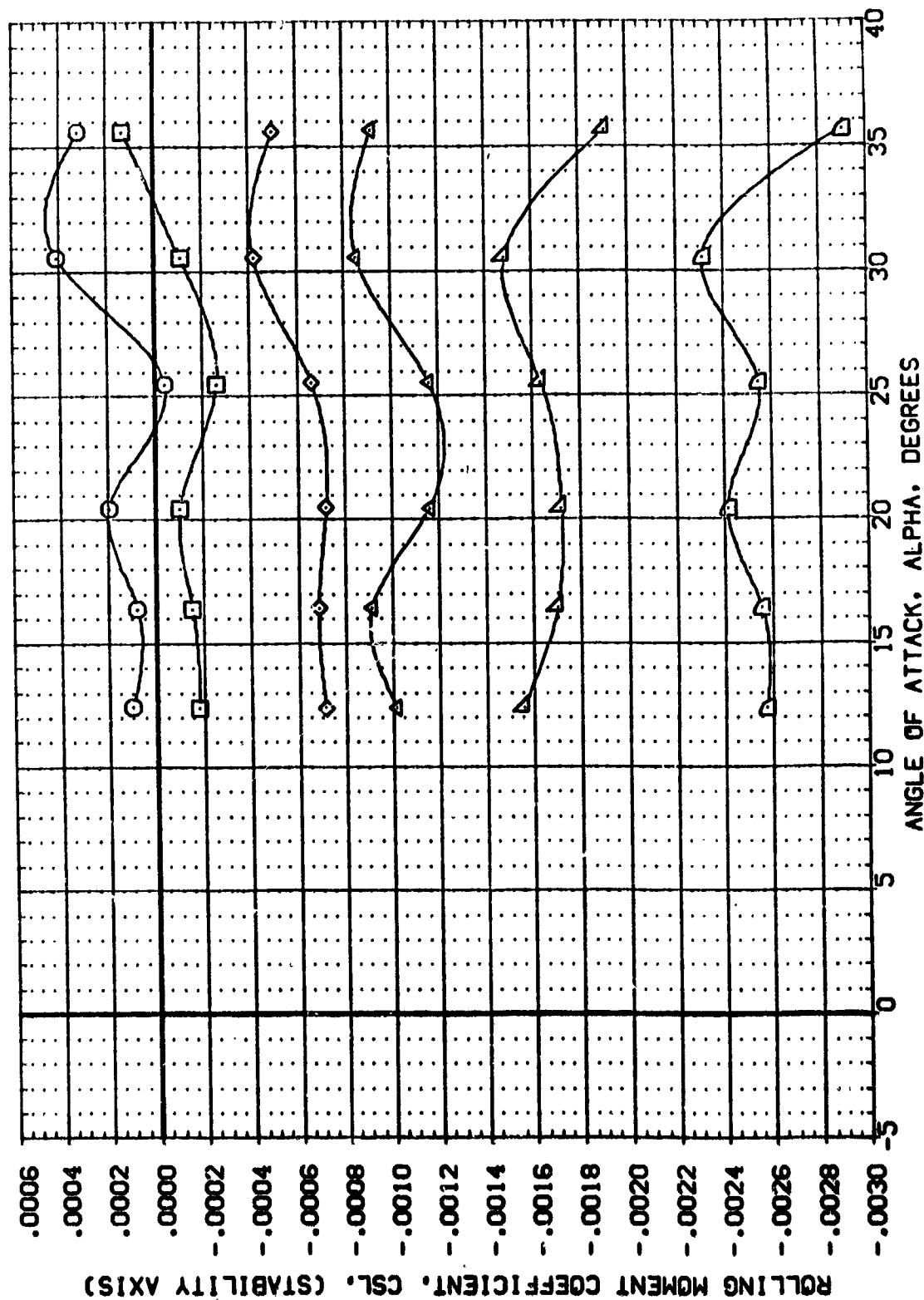
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RN/L	REFERENCE INFORMATION
(CPH004)	MA-7, 2PVT 1031, ROCKWELL PRR ORB, CONF.	.000	.000	1.000	SREF 7245 50. FT.
(CPH005)	MA-7, 2PVT 1031, ROCKWELL PRR ORB, CONF.	.000	37.000	1.000	LREF 7.6828 INCHES
(CPH006)	MA-7, 2PVT 1031, ROCKWELL PRR ORB, CONF.	.000	100.000	1.000	BREF 15.1152 INCHES
(CPH007)	MA-7, 2PVT 1031, ROCKWELL PRR ORB, CONF.	.000	199.000	1.000	YPRP 12.9510 INCHES
(CPH008)	MA-7, 2PVT 1031, ROCKWELL PRR ORB, CONF.	.000	328.000	1.000	ZPRP 6.0000 INCHES
(CPH009)	MA-7, 2PVT 1031, ROCKWELL PRR ORB, CONF.	.000	600.000	1.000	SCALE .0150



EFFECT OF DOWNWARD FIRING ROLL JET WITH WING OFF

(A)MACH = 4.00

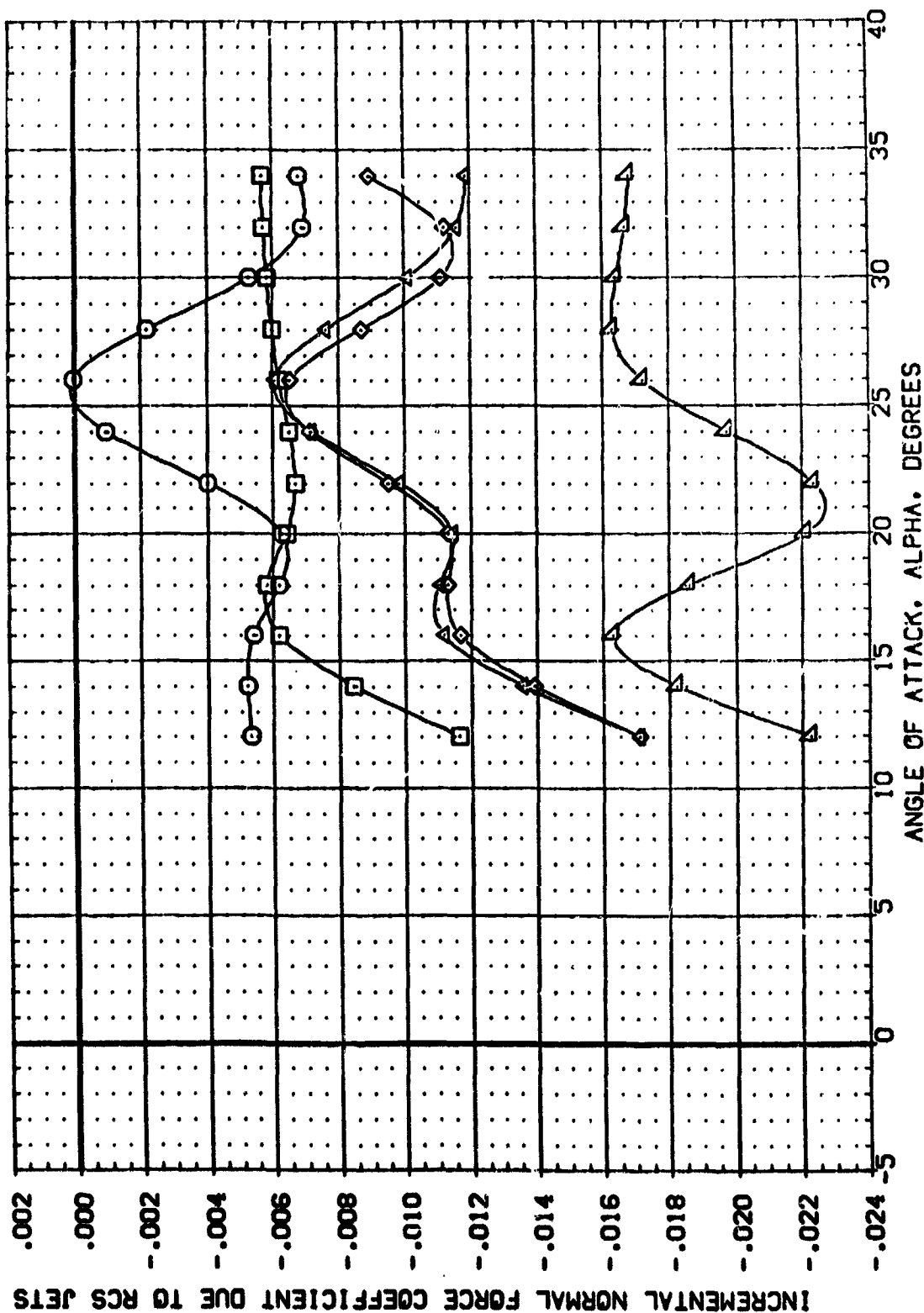
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PO-JET	RVL	REFERENCE INFORMATION
(CPH004)	MA-7, UPVT 1031, ROCKWELL PRR ORB. CONF. BTN40	.000	.000	.000	SREF 7245 SQ. FT.
(CPH005)	MA-7, UPVT 1031, ROCKWELL PRR ORB. CONF. BTN40	.000	37.000	.000	LREF 7.6828 INCHES
(CPH006)	MA-7, UPVT 1031, ROCKWELL PRR ORB. CONF. BTN40	.000	100.000	.000	BREF 15.1152 INCHES
(CPH007)	MA-7, UPVT 1031, ROCKWELL PRR ORB. CONF. BTN40	.000	199.000	.000	XMRP 12.9510 INCHES
(CPH008)	MA-7, UPVT 1031, ROCKWELL PRR ORB. CONF. BTN40	.000	328.000	.000	YMRP .0000 INCHES
(CPH009)	MA-7, UPVT 1031, ROCKWELL PRR ORB. CONF. BTN40	.000	600.000	.000	ZMRP 6.0000 INCHES
					SCALE .0150



EFFECT OF DOWNWARD FIRING ROLL JET WITH WING OFF

(A)MACH = 4.00

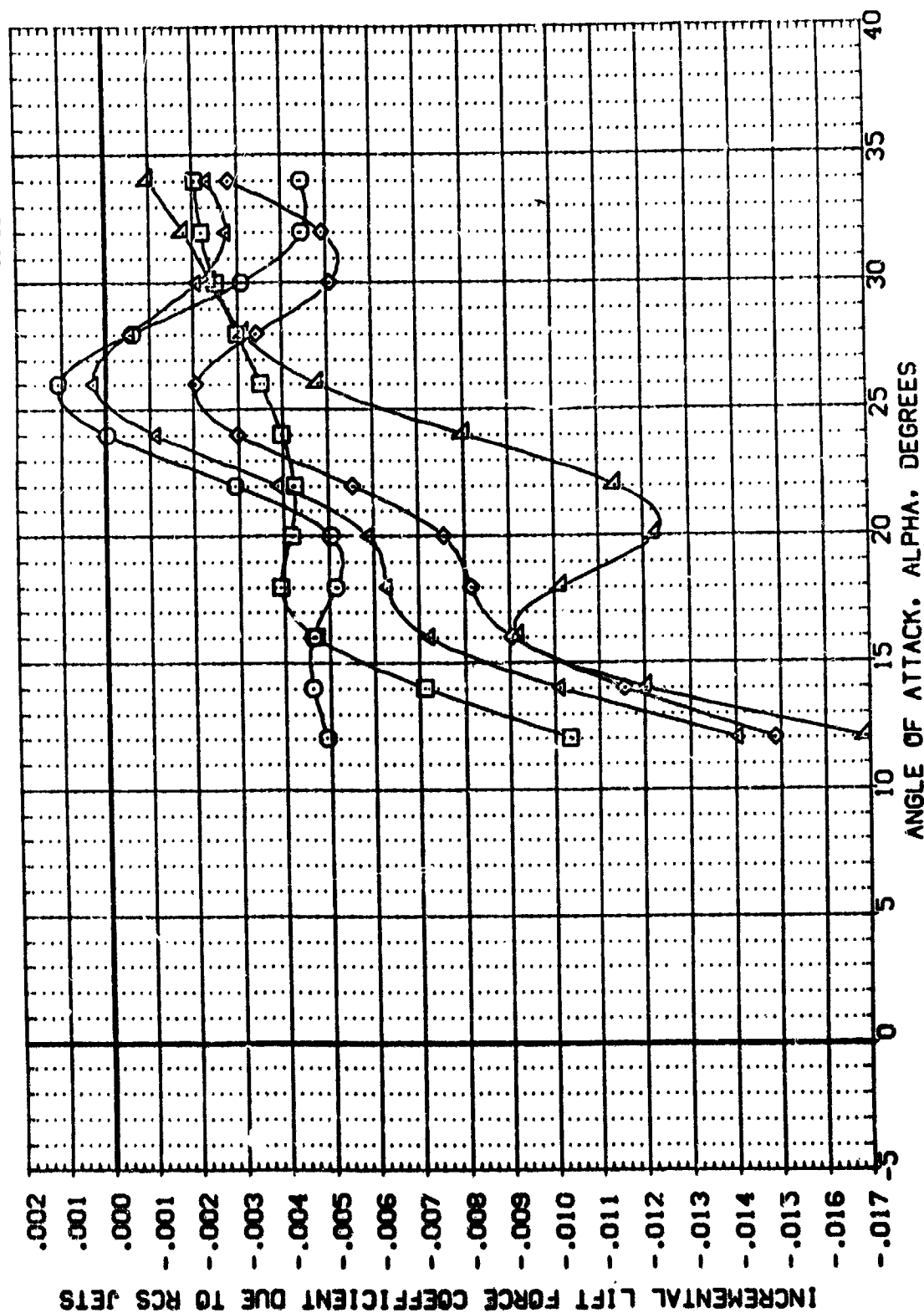
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVAL	REFERENCE INFORMATION
(AP005)	○	MA-7, UPVT 1031, ROCKWELL	.000	37.000	1.000	SREF 7245 SQ. FT.
(AP006)	×	MA-7, UPVT 1031, ROCKWELL	.000	100.000	1.000	LREF 7.6828 INCHES
(AP007)	△	MA-7, UPVT 1031, ROCKWELL	.000	199.000	1.000	BREF 15.1152 INCHES
(AP008)	□	MA-7, UPVT 1031, ROCKWELL	.000	328.000	1.000	XREF 12.9510 INCHES
(AP009)	◇	MA-7, UPVT 1031, ROCKWELL	.000	600.000	1.000	YREF .0000 INCHES
						ZREF 6.0000 INCHES
						SCALE .0150



ROLL JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A) MACH = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVL	REFERENCE INFORMATION
(AP005)	MA-7, UPVT 1031, ROCKWELL PRR 008, COF	.000	37.000	1.000	SREF .7245 SQ.FT.
(AP006)	MA-7, UPVT 1031, ROCKWELL PRR 008, COF	.000	100.000	1.000	LREF 7.8828 INCHES
(AP007)	MA-7, UPVT 1031, ROCKWELL PRR 008, COF	.000	199.000	1.000	BREF 15.1152 INCHES
(AP008)	MA-7, UPVT 1031, ROCKWELL PRR 008, COF	.000	328.000	1.000	XREF 12.9510 INCHES
(AP009)	MA-7, UPVT 1031, ROCKWELL PRR 008, COF	.000	600.000	1.000	YREF 6.0000 INCHES
					ZREF .0150 INCHES
					SCALE

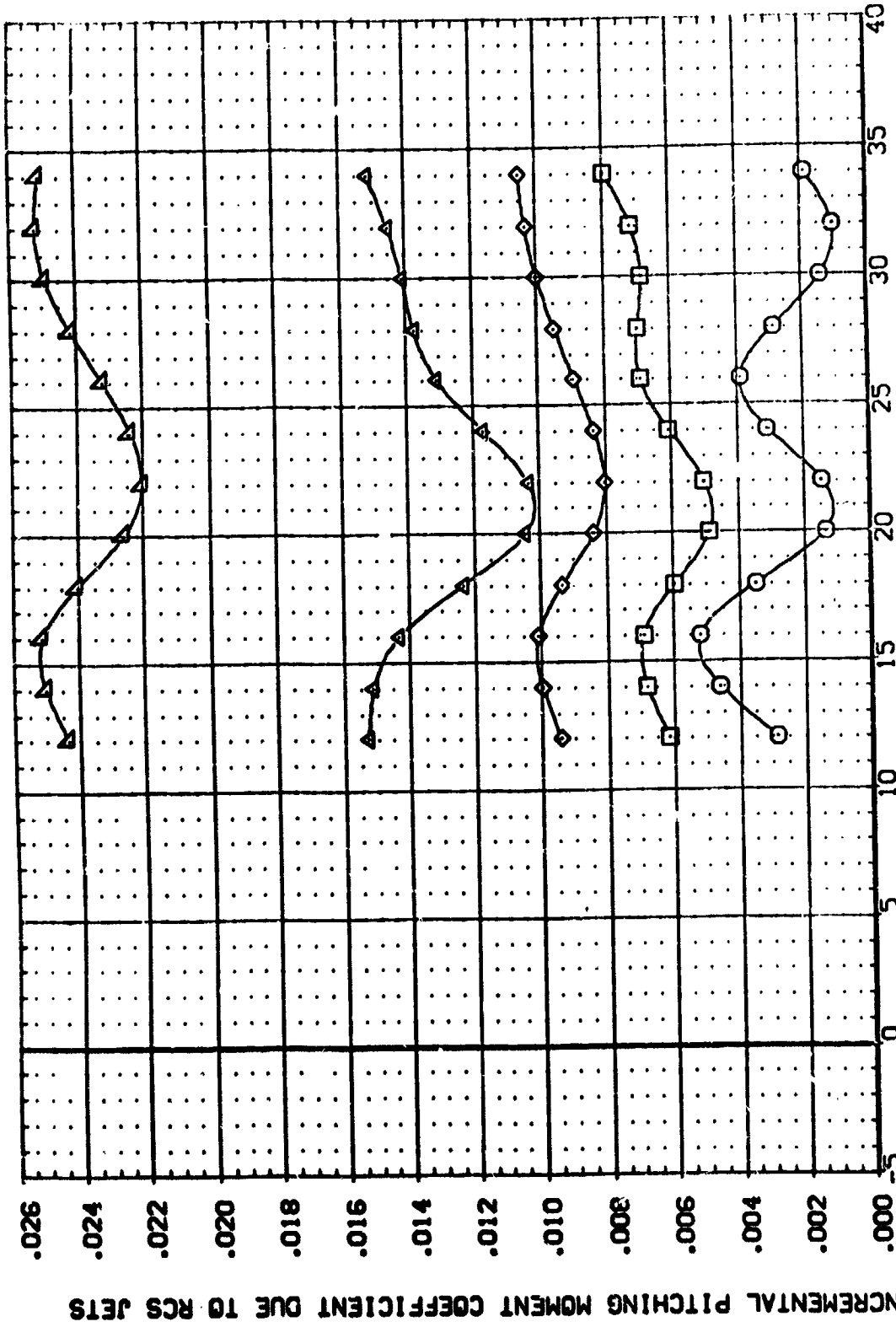


ROLL JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CONF.	BTN40	BETA	DLPO-J	RM/L	REFERENCE INFORMATION		
(APR005)	MA-7,LPVT 1031,ROCKWELL	PRR	088.	CONF.	BTN40		SREF	7.245	50.FT.
(APR006)	MA-7,LPVT 1031,ROCKWELL	PRR	088.	CONF.	BTN40	1.000	LREF	7.8828	INCHES
(APR007)	MA-7,LPVT 1031,ROCKWELL	PRR	088.	CONF.	BTN40	1.000	BREF	12.1152	INCHES
(APR008)	MA-7,LPVT 1031,ROCKWELL	PRR	088.	CONF.	BTN40	1.000	YREF	12.9510	INCHES
(APR009)	MA-7,LPVT 1031,ROCKWELL	PRR	088.	CONF.	BTN40	1.000	ZREF	6.0000	INCHES
							SCALE	6.0000	INCHES

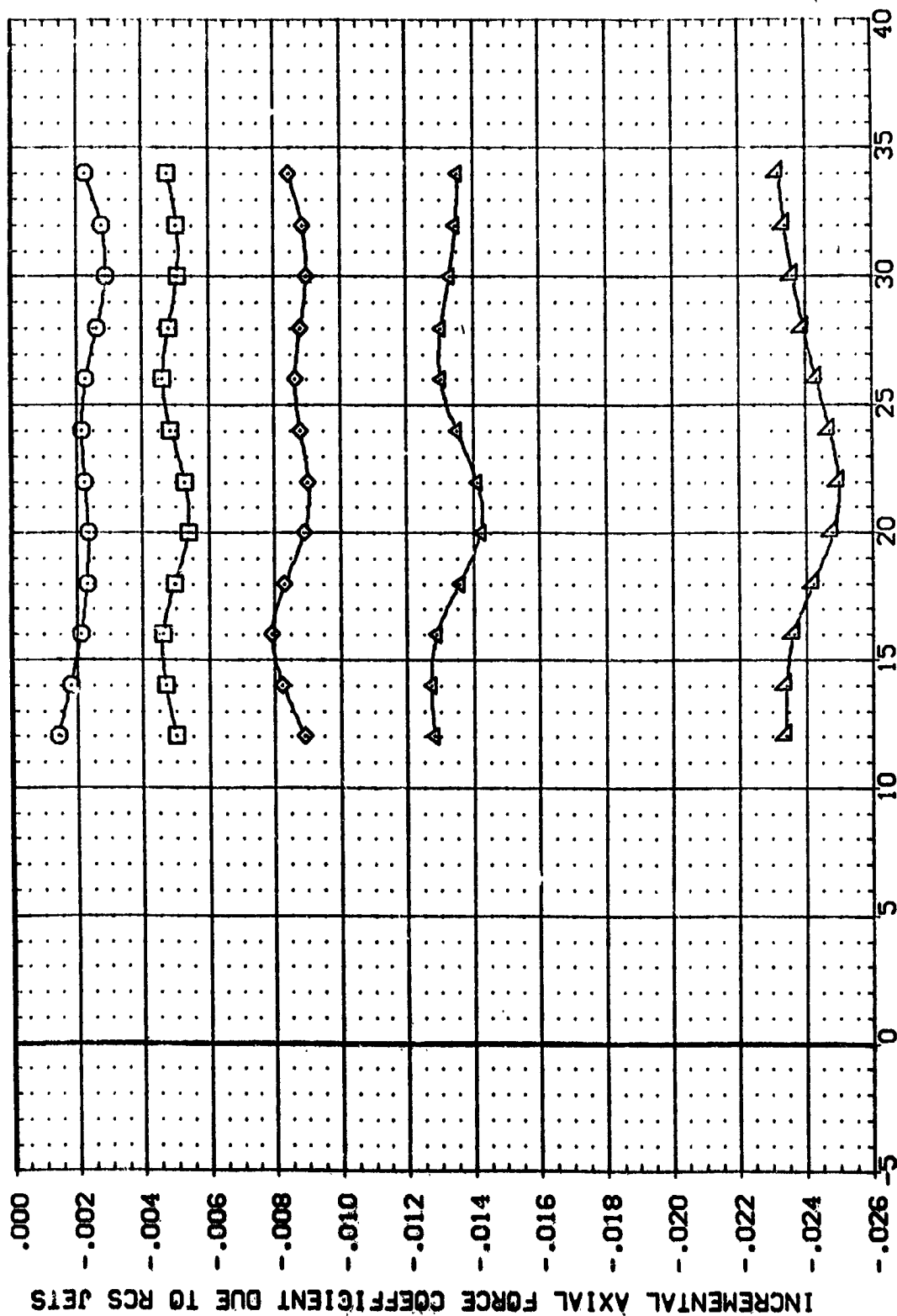


ROLL JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLP0-J	RN/L	REFERENCE INFORMATION
(APM005)	MA-7, LPVT 1031, ROCKWELL PRR CRB, CONF. BTN40	.000	37.000	1.000	SREF 7245 50 FT.
(APM006)	MA-7, LPVT 1031, ROCKWELL PRR CRB, CONF. BTN40	.000	100.000	1.000	LPEF 7.8828 INCHES
(APM007)	MA-7, LPVT 1031, ROCKWELL PRR C, CONF. BTN40	.000	199.000	1.000	EREF 15.1152 INCHES
(APM008)	MA-7, LPVT 1031, ROCKWELL PRR C, CONF. BTN40	.000	328.000	1.000	XRPF 12.9510 INCHES
(APM009)	MA-7, LPVT 1031, ROCKWELL PRR CRB, CONF. BTN40	.000	500.000	1.000	YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150



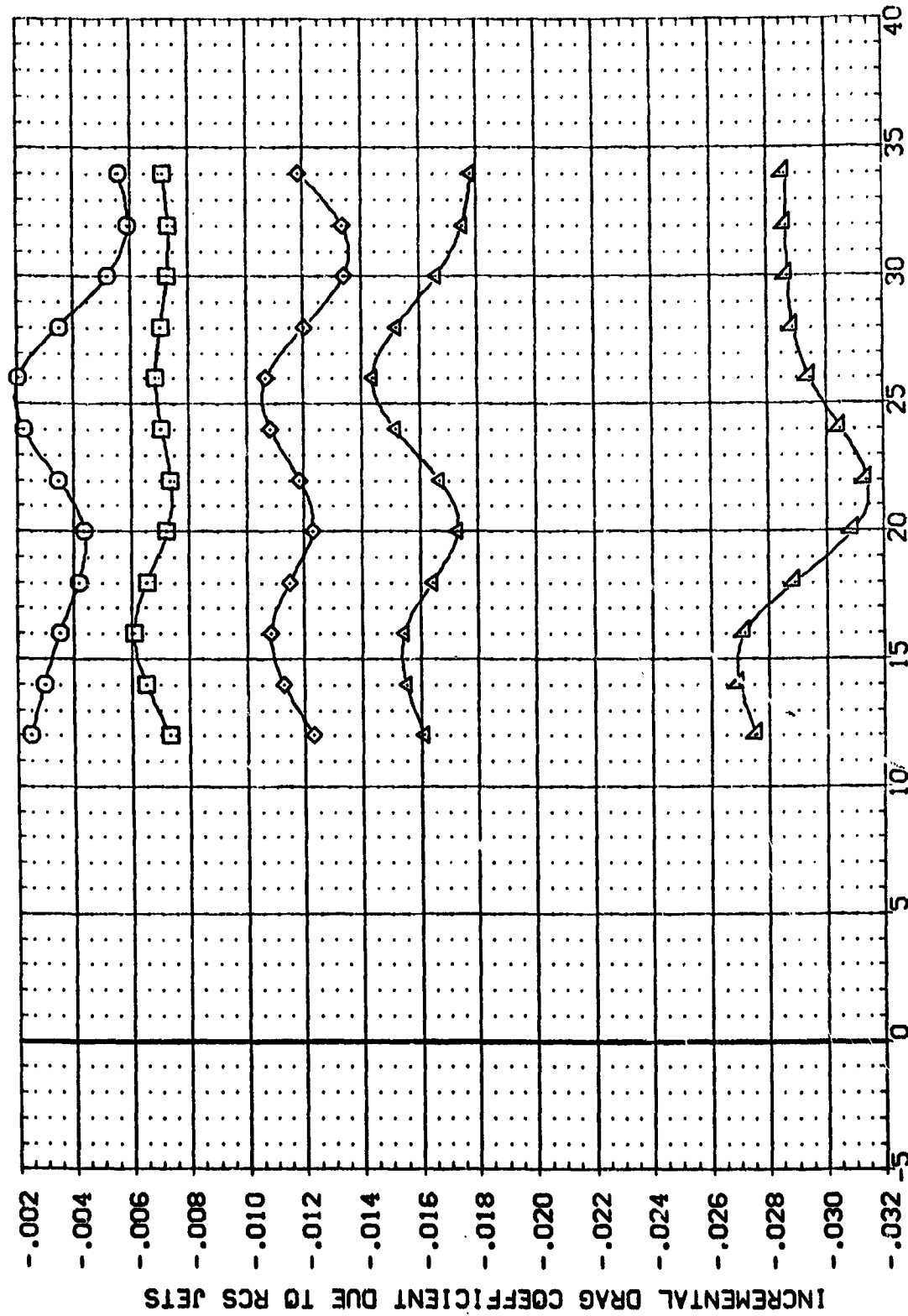
ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RVL	REFERENCE INFORMATION
(AP005)	MA-7, UPVT 1031, ROCKWELL PRR Q58, CONF. BTN40	.000	37.000	1.000	SREF 7245 SQ.FT.
(AP006)	MA-7, UPVT 1031, ROCKWELL PRR Q58, CONF. BTN40	.000	100.000	1.000	LREF 7.8828 INCHES
(AP007)	MA-7, UPVT 1031, ROCKWELL PRR Q58, CONF. BTN40	.000	199.000	1.000	BREF 15.1152 INCHES
(AP008)	MA-7, UPVT 1031, ROCKWELL PRR Q58, CONF. BTN40	.000	328.000	1.000	XMRP 12.5510 INCHES
(AP009)	MA-7, UPVT 1031, ROCKWELL PRR Q58, CONF. BTN40	.000	600.000	1.000	YMRP .0000 INCHES
					ZMRP 6.0000 INCHES
					SCALE .0150

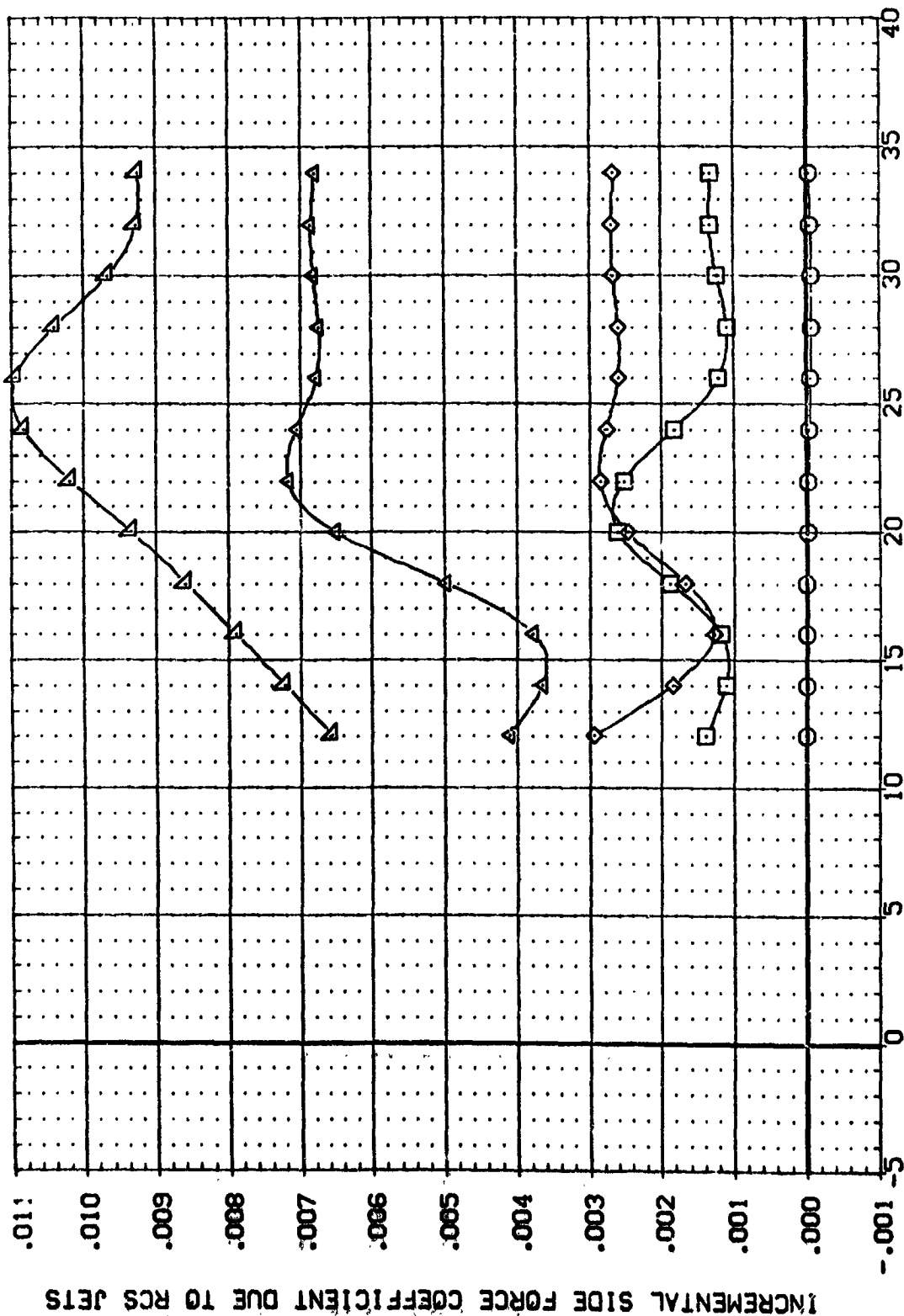


ROLL JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION

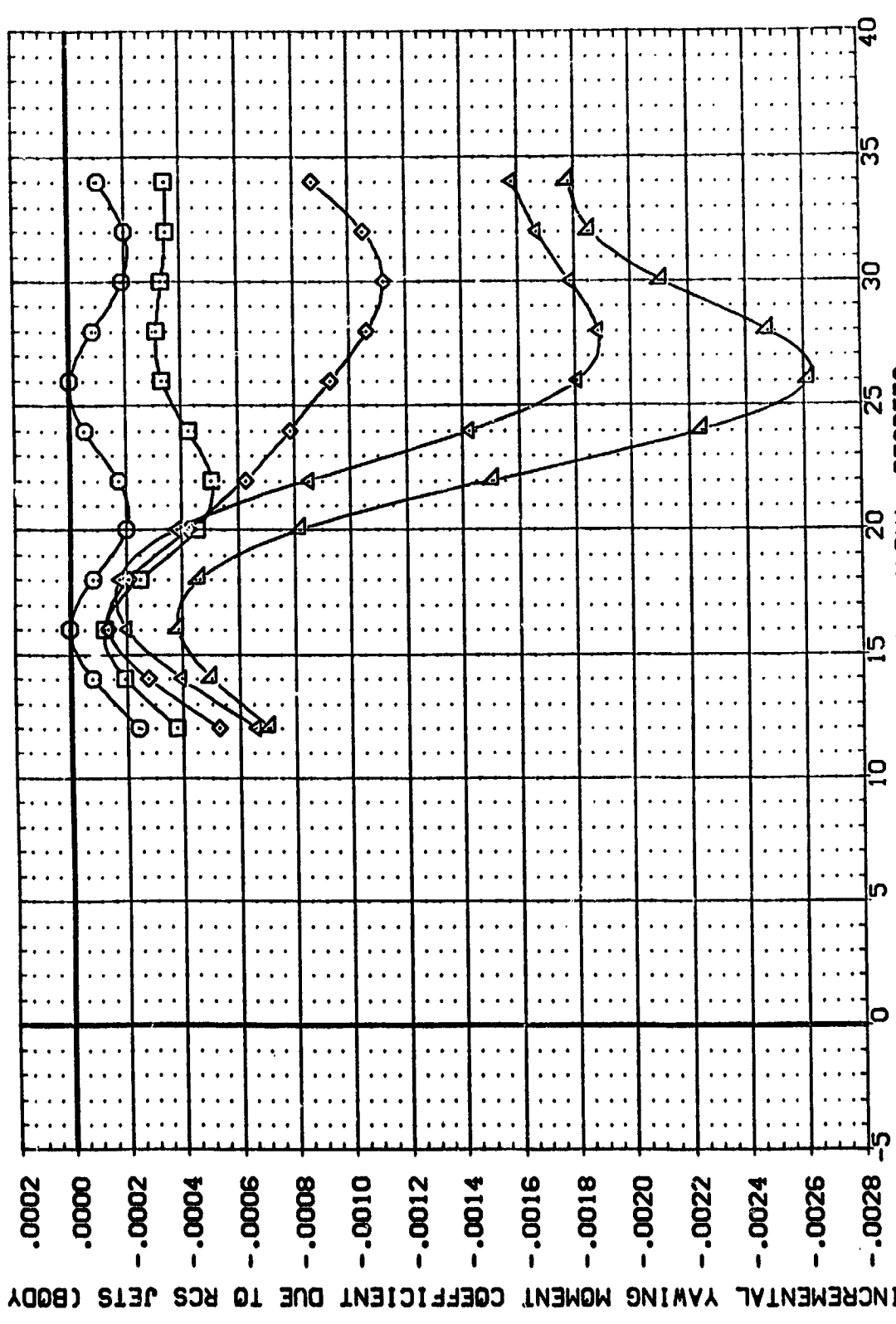
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DLPO-J	RN/L	REFERENCE INFORMATION
(AP005)	MA-7, UPVT 1031, ROCKWELL PRR 058	.000	37.000	1.000	SREF 7245 SQ. FT.
(AP006)	MA-7, UPVT 1031, ROCKWELL PRR 058	.000	100.000	1.000	LREF 7.8828 INCHES
(AP007)	MA-7, UPVT 1031, ROCKWELL PRR 058	.000	159.000	1.000	BREF 15.1152 INCHES
(AP008)	MA-7, UPVT 1031, ROCKWELL PRR 058	.000	328.000	1.000	XREF 12.9510 INCHES
(AP009)	MA-7, UPVT 1031, ROCKWELL PRR 058	.000	500.000	1.000	YREF .0000 INCHES
					ZREF .0150 INCHES



REFERENCE INFORMATION  
 SREF 7.245 SQ.FT.  
 LREF 7.8828 INCHES  
 BREF 15.1152 INCHES  
 YPRP 12.9510 INCHES  
 ZPRP 6.0000 INCHES  
 SCALE .0150

BETA DLPO-J RV/L  
 .000 37.070 1.000  
 .000 100.000 1.000  
 .000 199.000 1.000  
 .000 328.000 1.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (APR005) MA-7-UPVT 1031.ROCKWELL PRR ORB: CONF: BTN40  
 (APR006) MA-7-UPVT 1031.ROCKWELL PRR ORB: CONF: BTN40  
 (APR007) MA-7-UPVT 1031.ROCKWELL PRR ORB: CONF: BTN40  
 (APR008) MA-7-UPVT 1031.ROCKWELL PRR ORB: CONF: BTN40  
 (APR009) MA-7-UPVT 1031.ROCKWELL PRR ORB: CONF: BTN40

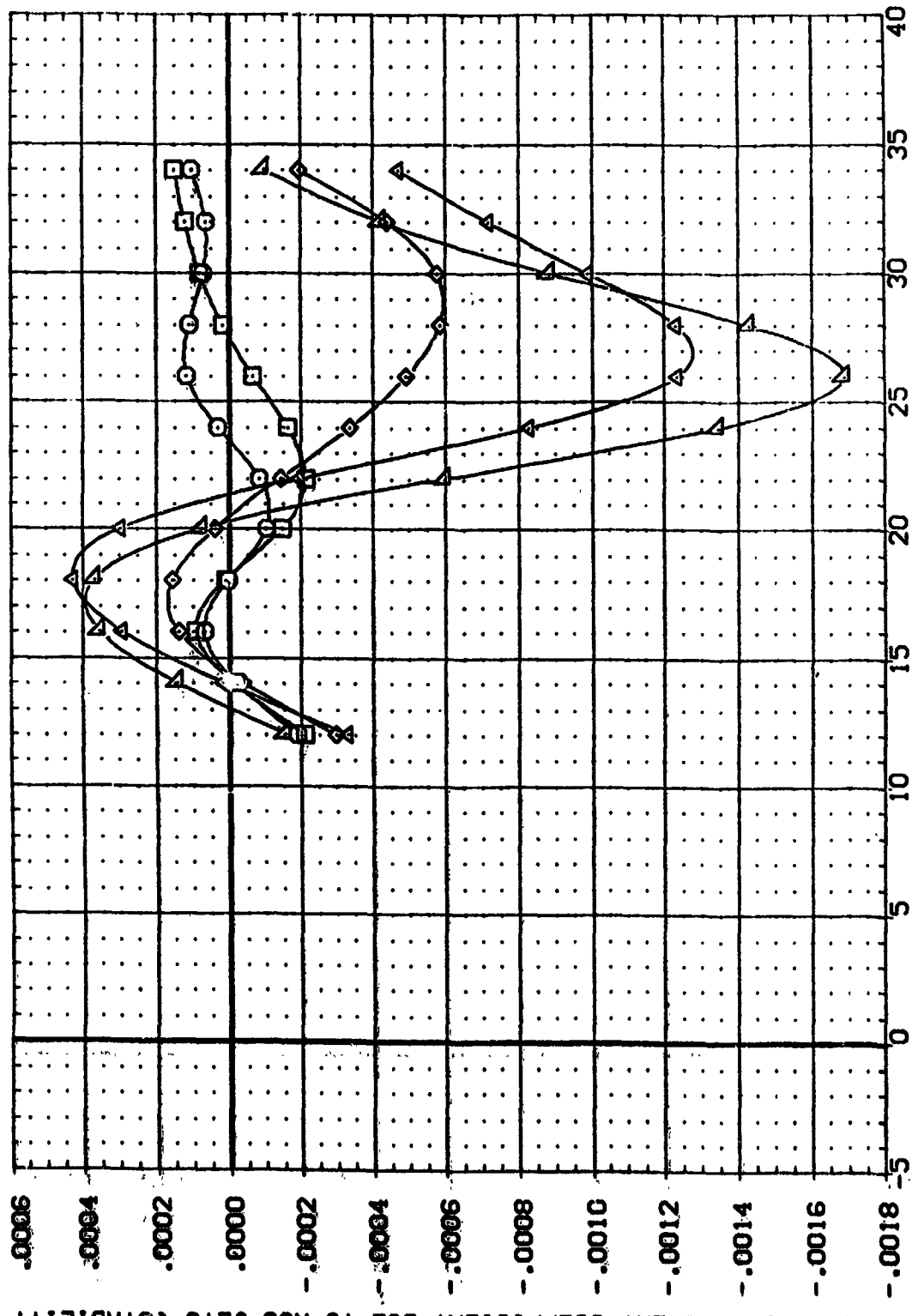


ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA		DLPO-J		RV/L		REFERENCE INFORMATION	
(APR005)	MA-7-UPVT	1031-ROCKWELL	PRR CRB	CONF.	BTN40	.000	37.000	1.000	SREF	.7245	50. FT.
(APR006)	MA-7-UPVT	1031-ROCKWELL	PRR CRB	CONF.	BTN40	.000	100.000	1.000	LREF	7.8828	INCHES
(APR007)	MA-7-UPVT	1031-ROCKWELL	PRR CRB	CONF.	BTN40	.000	199.000	1.000	BREF	15.1152	INCHES
(APR008)	MA-7-UPVT	1031-ROCKWELL	PRR CRB	CONF.	BTN40	.000	328.000	1.000	YMRP	12.9510	INCHES
(APR009)	MA-7-UPVT	1031-ROCKWELL	PRR CRB	CONF.	BTN40	.000	600.000	1.000	ZMRP	6.0000	INCHES
									SCALE	.0150	



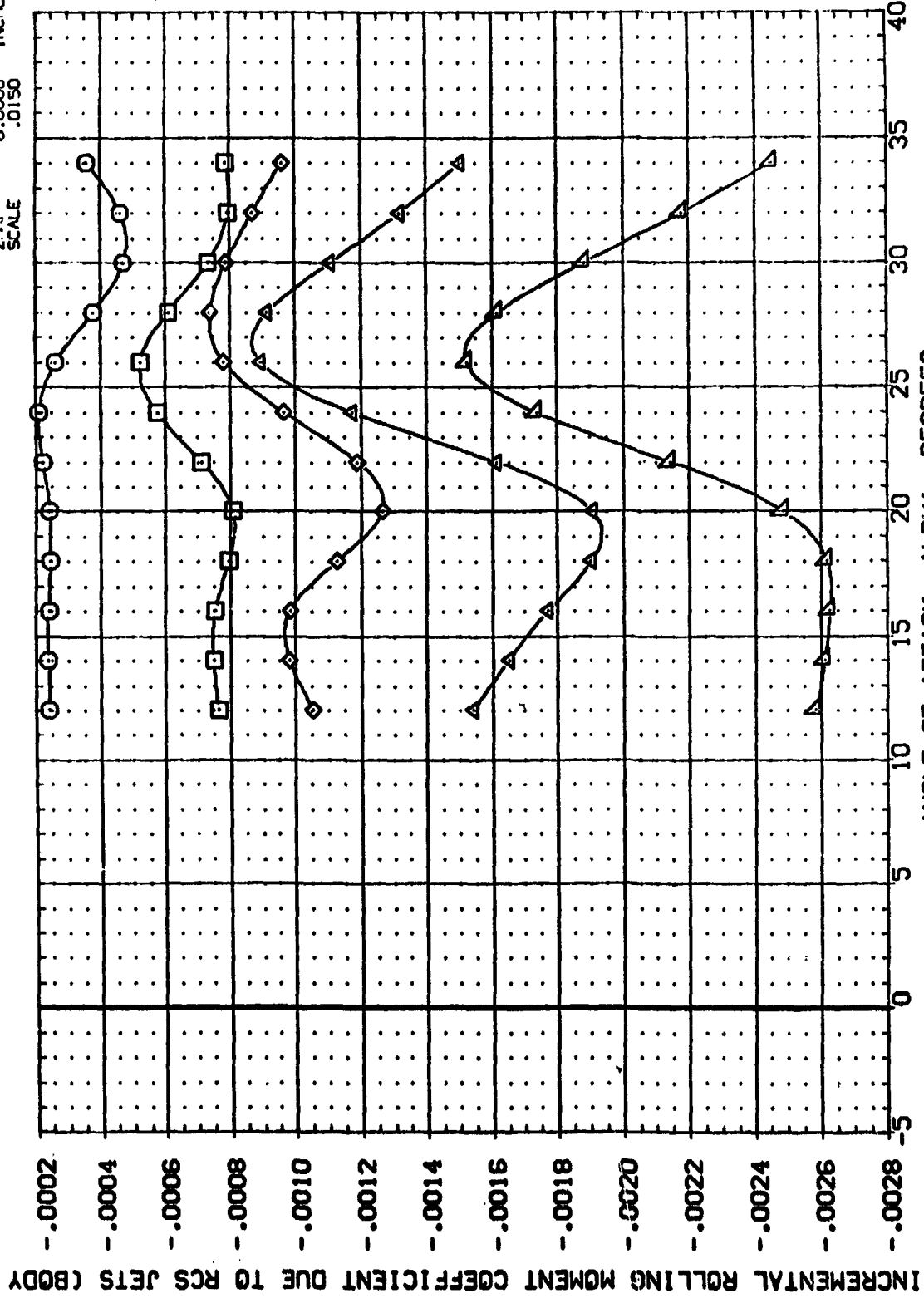
ROLL JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(MACH = 4.00)



DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(AP005)	MA-7, UPVT	1031, ROCKWELL	PRR	0.00	37.000	RN/L	1.000	SREF	7245	50. FT.
(AP006)	MA-7, UPVT	1031, ROCKWELL	PRR	0.00	100.000		1.000	UREF	7.6828	INCHES
(AP007)	MA-7, UPVT	1031, ROCKWELL	PRR	0.00	199.000		1.000	BREF	15.1152	INCHES
(AP008)	MA-7, UPVT	1031, ROCKWELL	PRR	0.00	328.000		1.000	XPRP	12.9510	INCHES
(AP009)	MA-7, UPVT	1031, ROCKWELL	PRR	0.00	600.000		1.000	YPRP	.0000	INCHES
								ZPRP	6.0000	INCHES
								SCALE	.0150	



REFERENCE INFORMATION

SREF	7245	50. FT.
LREF	7.8828	INCHES
BREF	15.1152	INCHES
XPRP	12.5510	INCHES
YPRP	.0000	INCHES
ZPRP	6.0000	INCHES
SCALE	.0150	

BETA

DLPO-J	RVAL
.000	1.000
.000	1.000
.000	1.000
.000	1.000
.000	1.000
.000	1.000

BTM40

BTM40	BTM40
BTM40	BTM40
BTM40	BTM40
BTM40	BTM40
BTM40	BTM40
BTM40	BTM40

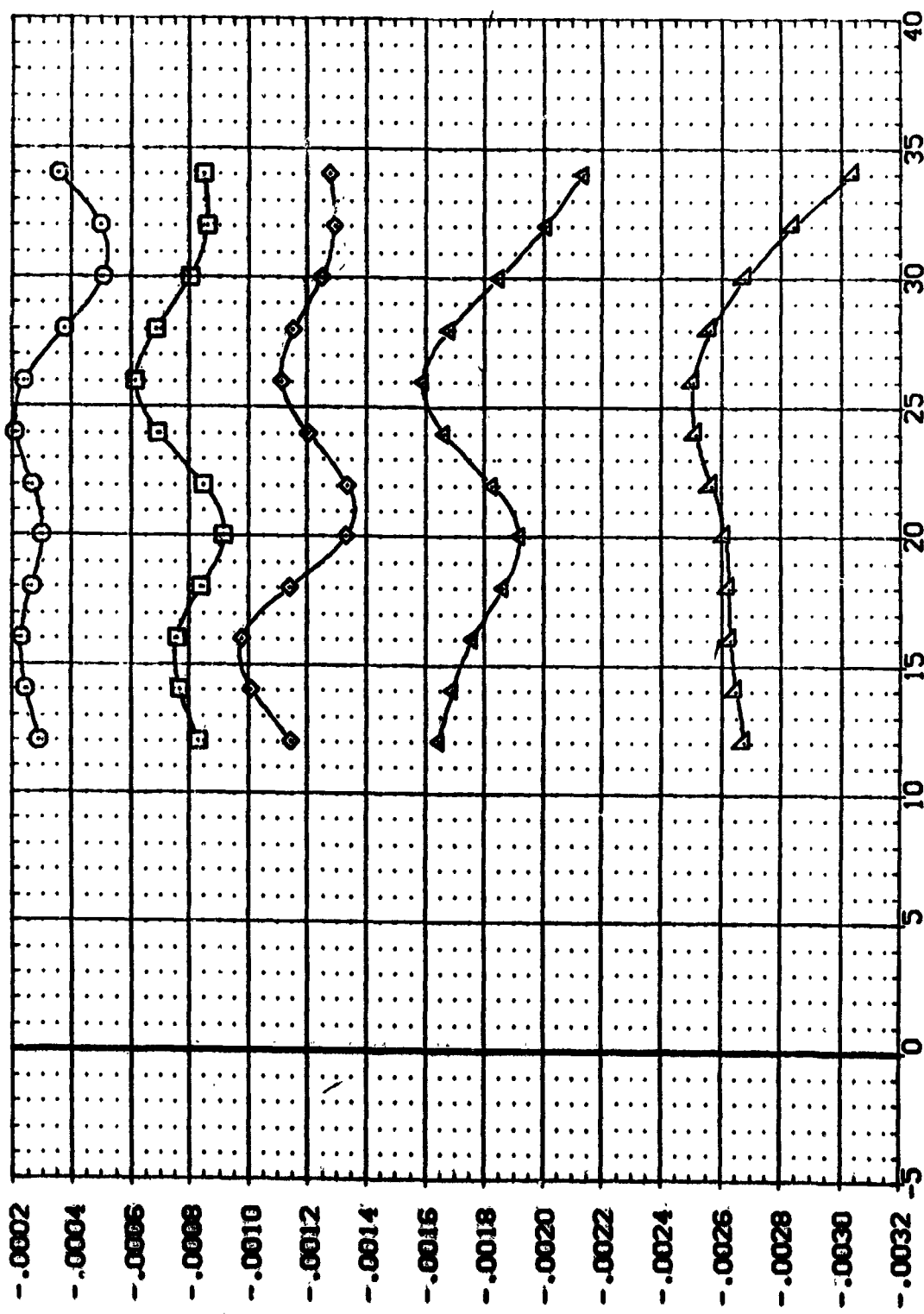
CONFIGURATION DESCRIPTION

MA-7-UPVT	1031-ROCKWELL	PRR	QRB	CONF
MA-7-UPVT	1031-ROCKWELL	PRR	QRB	CONF
MA-7-UPVT	1031-ROCKWELL	PRR	QRB	CONF
MA-7-UPVT	1031-ROCKWELL	PRR	QRB	CONF

DATA SET SYMBO

(APR005)	(APR006)	(APR007)	(APR008)
(APR009)	(APR010)	(APR011)	(APR012)

INCREMENTAL ROLLING MOMENT COEFFICIENT DUE TO RCS JETS STABILITY AXIS



ANGLE OF ATTACK, ALPHA, DEGREES

ROLL JET INTERFERENCE WITH WING OFF (INCREMENTAL DATA)

(A)MACH = 4.00

APPENDIX  
TABULATED SOURCE DATA

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Plotted data tabulations are available  
on request from DMS.



DATE 08 FEB 74

TABULATED SOURCE DATA LARC UPWT 1031

PAGE 1

MA-7, UPWT 1031, ROCKWELL FRR ORB. CONF. BTNI

(RPM001) ( 16 JAN 74 )

## REFERENCE DATA

REF = .7245 SQ.FT. YARP = 12.9510 INCHES  
LREF = 7.8628 INCHES YARP = .0000 INCHES  
BREF = 15.1152 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 37.000  
RN/L = 1.000

RUN NO. 81/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAOH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.298	-.00071	.06176	.03694	.02160	-.00025	.00051	.00087	12.05675	5.39326	3.48940
4.000	16.337	-.00108	.11023	.03759	.03707	-.00027	.00039	.00188	13.00867	5.39326	4.44133
4.000	20.403	-.00102	.15628	.03670	.03456	-.00026	.00061	.00151	13.00867	6.34318	3.48940
4.000	25.514	-.00140	.22871	.03579	.07518	-.00031	.00073	.00204	10.15289	7.29711	3.48940
4.000	30.582	-.00096	.31130	.03600	.09680	.00001	.00059	.00095	8.24904	10.15289	3.48940
4.000	35.599	-.00121	.38824	.03515	.11579	.00001	.00053	.00122	7.29711	14.91253	3.48940
GRADIENT		-.00001	.01409	-.00015	.00408	.00001	.00000	-.00000	-.25463	.38900	-.01751

MA-7, UPWT 1031, ROCKWELL FRR ORB. CONF. BTNI

(RPM002) ( 16 JAN 74 )

## REFERENCE DATA

REF = .7245 SQ.FT. YARP = 12.9510 INCHES  
LREF = 7.8628 INCHES YARP = .0000 INCHES  
BREF = 15.1152 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 328.000  
RN/L = 1.000

RUN NO. 79/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAOH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.365	-.00057	.06194	.03874	.02354	-.00025	.00030	.00086	22.52794	6.34518	4.44133
4.000	16.484	-.00112	.10025	.03742	.03581	-.00028	.00038	.00197	18.72024	5.39326	4.44133
4.000	20.436	-.00100	.16219	.03655	.03349	-.00026	.00061	.00147	15.86445	5.39326	4.44133
4.000	25.494	-.00154	.22874	.03591	.07704	-.00030	.00094	.00206	12.05675	7.29711	4.44133
4.000	30.505	-.00098	.31150	.03637	.09686	.00025	.00058	.00101	9.20096	10.15289	4.44133
4.000	35.614	-.00119	.39429	.03627	.11656	.00001	.00053	.00117	5.39326	16.81638	3.48940
GRADIENT		-.00002	.01424	-.00009	.00404	.00002	.00001	-.00001	-.70566	.42398	-.02947

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BTM1

(RPM003) ( 16 JAN 74 )

## REFERENCE DATA

SRP = .7245 SQ.FT. XRRP = 12.9510 INCHES  
LRRP = 7.8828 INCHES YRRP = .0000 INCHES  
BRRP = 19.1192 INCHES ZRRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 600.000  
RV/L = 1.000

## PARAMETRIC DATA

RUN NO. 80/ 0 RV/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.451	-.00114	.06174	.03820	.02347	-.00029	.00016	.00226	26.33565	6.34518	3.48940
4.000	16.457	-.00108	.11008	.03645	.03900	-.00027	.00038	.00188	23.47987	6.34518	3.48940
4.000	20.413	-.00068	.15624	.03608	.05458	-.00026	.00040	.00150	21.57602	6.34518	3.48940
4.000	25.515	-.00140	.22861	.03528	.07711	-.00051	.00073	.00204	14.91253	7.29711	3.48940
4.000	30.549	-.00141	.31148	.03504	.09101	-.00021	.00023	.00240	10.15289	10.15289	3.48940
4.000	35.637	-.00121	.39408	.03560	.116	.00025	.00052	.00122	9.20096	13.96060	3.48940
GRADIENT		-.00001	.01438	-.00011	.004	.00002	.00001	-.00002	-.81109	.31690	.00000

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BTM10

(RPM004) ( 16 JAN 74 )

## REFERENCE DATA

SRP = .7245 SQ.FT. XRRP = 12.9510 INCHES  
LRRP = 7.8828 INCHES YRRP = .0000 INCHES  
BRRP = 19.1192 INCHES ZRRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = .000  
RV/L = 1.000

## PARAMETRIC DATA

RUN NO. 73/ 0 RV/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.399	-.00089	.07552	.03982	.72127	-.00001	.00051	.00083	7.15675	12.86831	3.34904
4.000	16.369	-.00108	.11602	.03793	.63599	-.00003	.00038	.00189	6.20482	12.86831	4.30096
4.000	20.419	-.00100	.16816	.03784	.05426	-.00002	.00061	.00147	6.20482	14.77216	3.34904
4.000	25.464	-.00152	.23491	.03661	.07412	-.00030	.00095	.00202	5.25289	14.77216	3.34904
4.000	30.562	-.00153	.31755	.03670	.09580	.00021	.00045	.00237	5.25289	15.72409	3.34904
4.000	35.617	-.00117	.40082	.03629	.11558	.00001	.00053	.00113	6.20482	15.72409	3.34904
GRADIENT		-.00003	.01415	-.00013	.00410	.00000	.00000	.00002	-.04998	.13773	-.01756

DATE 08 FEB 74

TABULATED SOURCE DATA LARC UPWT 1031

PAGE 3

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BTM40

(RPM005) ( 16 JAN 74 )

## REFERENCE DATA

8007 = .7245 58.47. 100P = 12.9510 INCHES  
L007 = 7.4028 INCHES 100P = .0000 INCHES  
0007 = 15.1132 INCHES 200P = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 37.000  
RM/L = 1.000

## PARAMETRIC DATA

RUN NO. 74/ 0 RM/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
MA01	12.350	-.00055	.06783	.03623	.02433	-.00025	.00030	.00081	6.20482	12.86831	3.34904
4.000											
4.000	16.378	-.00106	.11037	.03378	.04097	-.00027	.00036	.00188	6.20482	12.86831	3.34904
4.000	20.427	-.00006	.16229	.03551	.05544	-.00026	.00040	.00145	5.25289	14.77216	3.34904
4.000	25.488	-.00190	.22528	.03439	.07799	-.00074	.00095	.00196	5.25289	14.77216	3.34904
4.000	30.571	-.00137	.31171	.03379	.09698	-.00027	.00024	.00229	5.25289	15.72409	3.34904
4.000	35.627	-.00116	.39471	.03457	.11860	-.00023	.00034	.00112	6.20482	15.72409	3.34904
GRADIENT		-.00003	.01414	-.00015	.00404	-.00000	.00001	.00002	-.01495	.13753	.00000

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BTM40

(RPM006) ( 16 JAN 74 )

## REFERENCE DATA

8007 = .7245 58.47. 100P = 12.9510 INCHES  
L007 = 7.4028 INCHES 100P = .0000 INCHES  
0007 = 15.1132 INCHES 200P = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 100.000  
RM/L = 1.000

## PARAMETRIC DATA

RUN NO. 75/ 0 RM/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
MA01	12.350	-.00109	.06215	.03479	.02745	-.00077	.00017	.00215	7.15675	12.86831	3.34904
4.000											
4.000	16.429	-.00160	.11056	.03328	.04295	-.00079	.00025	.00317	7.15675	13.82023	3.34904
4.000	20.441	-.00196	.16244	.03243	.05929	-.00082	.00013	.00415	6.20482	14.77216	3.34904
4.000	25.517	-.00193	.22528	.03197	.08107	-.00102	.00060	.00334	6.20482	14.77216	3.34904
4.000	30.574	-.00192	.31197	.03161	.10273	-.00055	.00011	.00364	7.15675	14.77216	3.34904
4.000	35.619	-.00155	.39501	.03186	.12434	-.00075	.00019	.00240	7.15675	17.62794	3.34904
GRADIENT		-.00002	.01431	-.00012	.00419	.00000	.00000	.00001	.00248	.16281	.00000

NA-7,UPUT 1031,ROCKWELL PRR ORB. CONF. BTM40

(RPM007) ( 16 JAN 74 )

## REFERENCE DATA

WGT = .7245 LB./FT. WWP = 12.9310 INCHES  
LWT = 7.6828 INCHES WWP = .0000 INCHES  
WGT = 19.1152 INCHES WWP = 6.0000 INCHES  
SCALE = .0190

## PARAMETRIC DATA

BETA = .000 PO-JET = 199.000  
RVL = 1.000

RUN NO. 76/ 0 RVL = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLN	CEL	CYN	CY	PB1	PB2	PB3
4.000	12.337	-.00166	.05444	.03093	.03263	-.00105	.00003	.00355	7.15675	13.82023	3.34904
4.000	16.408	-.00160	.10478	.02996	.04607	-.00103	.00025	.00316	7.15675	13.82023	3.34904
4.000	20.408	-.00193	.15690	.02864	.06244	-.00129	.00014	.00408	7.15675	13.82023	3.34904
4.000	25.519	-.00220	.22934	.02795	.08310	-.00131	.00005	.00466	5.25269	13.82023	3.34904
4.000	30.572	-.00209	.30628	.02770	.10595	-.00060	-.00067	.00505	6.20482	14.77216	3.34904
4.000	35.654	-.00196	.39503	.02830	.12636	-.00103	-.00015	.00373	6.20482	16.67602	3.34904
GRADIENT		-.00002	.01448	-.00012	.00414	.00001	-.00002	.00004	-.05750	.10745	.00000

NA-7,UPUT 1031,ROCKWELL PRR ORB. CONF. BTM40

(RPM008) ( 16 JAN 74 )

## REFERENCE DATA

WGT = .7245 LB./FT. WWP = 12.9310 INCHES  
LWT = 7.6828 INCHES WWP = .0000 INCHES  
WGT = 19.1152 INCHES WWP = 6.0000 INCHES  
SCALE = .0190

## PARAMETRIC DATA

BETA = .000 PO-JET = 328.000  
RVL = 1.000

RUN NO. 77/ 0 RVL = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLN	CEL	CYN	CY	PB1	PB2	PB3
4.000	12.360	-.00219	.05676	.02692	.03644	-.00157	-.00010	.00483	8.10667	13.82023	3.34904
4.000	16.401	-.00262	.10516	.02494	.05005	-.00183	.00020	.00582	8.10667	13.82023	3.34904
4.000	20.439	-.00368	.15710	.02355	.06456	-.00189	.00015	.00622	7.15675	13.82023	3.34904
4.000	25.510	-.00364	.22953	.02351	.08709	-.00143	-.00060	.00685	6.20482	13.82023	3.34904
4.000	30.542	-.00365	.30655	.02334	.10991	-.00096	-.00130	.00920	5.25269	14.77216	3.34904
4.000	35.642	-.00336	.39933	.02272	.13141	-.00164	-.00099	.00785	7.15675	15.72409	3.34904
GRADIENT		-.00005	.01431	-.00015	.00414	.00002	-.00006	.00015	-.08495	.07760	.00000



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TABULATED SOURCE DATA LARC UPLAT 1031

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MA-7, UPLAT 1031, ROCKWELL PER ORG. CONF. STN410

(RPN009) (16 JAN 74)

## REFERENCE DATA

WOP = .7245 50 FT. WOP = 12.9510 INCHES  
LWP = 7.8028 INCHES WOP = .0000 INCHES  
SWP = 15.1152 INCHES SWP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 600.000  
RW/L = 1.000

RUN NO. 76/ 0 RW/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WOP	ALPHA	BETA	ON	CA	CLN	COL	CYN	CY	PB1	PB2	PB3
4.000	12.343	-.00339	.05132	.01431	-.04358	-.00280	-.00016	.00748	6.10667	11.91638	3.34904
4.000	16.413	-.00462	.09995	.01420	-.06106	-.00266	.00000	.00992	6.10667	11.91638	3.34904
4.000	20.439	-.00486	.14587	.01292	-.07673	-.00245	-.00034	.01099	6.20482	13.82023	3.34904
4.000	25.331	-.00507	.21823	.01217	-.09740	-.00224	-.00164	.01302	6.20482	13.82023	3.34904
4.000	30.567	-.00474	.30110	.01314	-.12068	-.00176	-.00157	.01186	5.25289	15.72409	3.34904
4.000	35.644	-.00445	.38415	.01317	-.14052	-.00267	-.00125	.01049	7.15675	16.67602	3.34904
GRADIENT		-.00003	.01431	-.00011	.00412	.00002	-.00007	.00013	-.07744	.21493	.00000

MA-7, UPLAT 1031, ROCKWELL PER ORG. CONF. STN411

(RPN010) (06 FEB 74)

## REFERENCE DATA

WOP = .7245 50 FT. WOP = 12.9510 INCHES  
LWP = 7.8028 INCHES WOP = .0000 INCHES  
SWP = 15.1152 INCHES SWP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RW/L = 1.000

RUN NO. 67/ 0 RW/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WOP	ALPHA	BETA	ON	CA	CLN	COL	CYN	CY	PB1	PB2	PB3
4.000	12.447	-.00059	.25077	.05778	-.03466	.00022	.00031	.00092	7.21638	8.16831	5.31253
4.000	16.529	-.00032	.37236	.05428	-.04021	.00050	.00068	-.00033	6.26445	7.21638	5.31253
4.000	20.540	-.00042	.50418	.05119	-.04763	.00051	.00078	-.00058	4.36060	7.21638	4.36060
4.000	25.692	-.00038	.68434	.05717	-.05995	.00076	.00086	-.00095	4.36060	7.21638	4.36060
4.000	30.789	-.00040	.87998	.05609	-.06006	.00077	.00107	-.00105	4.36060	6.26445	4.36060
4.000	35.841	.00043	1.08336	.05369	-.10191	.00129	.00098	-.00256	4.36060	5.31253	4.36060
GRADIENT		.00003	.03568	-.00016	-.00286	.00004	.00003	-.00012	-.11671	-.31430	-.04469

NA-7, UPWT 1031, ROCKWELL PFR ORB. CONF. BUH41

(RPM011) (06 FEB 74)

## REFERENCE DATA

SPT = .7245 80.0 FT. 1000 = 12.9910 INCHES  
 LWT = 7.4828 INCHES 1000 = .0000 INCHES  
 BWT = 13.1132 INCHES 1000 = 6.0000 INCHES  
 SCALE = .0130

## PARAMETRIC DATA

BETA = .000 PO-JET = 37.000  
 RM/L = 1.000

RUN NO. 68/ 0 RM/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.400	-.00061	.25037	.05747	-.03458	.00046	.00031	.00097	5.31253	6.26445	4.36060
4.000	16.300	-.00091	.36642	.05764	-.03909	.00046	.00034	.00113	5.31253	6.26445	4.36060
4.000	20.547	-.00044	.39614	.05763	-.04690	.00051	.00078	-.00053	5.31253	6.26445	4.36060
4.000	25.704	-.00036	.60339	.05771	-.05992	.00052	.00067	-.00100	4.36060	6.26445	4.36060
4.000	30.409	-.00028	.87200	.05614	-.07965	.00076	.00065	-.00101	5.31253	6.26445	4.36060
4.000	35.640	.00045	1.06409	.05415	-.10374	.00105	.00099	-.00260	4.36060	5.31253	5.31253
	GRADIENT	.00004	.03556	-.00014	-.00294	.00002	.00003	-.00015	-.03471	-.02970	.02970

## REFERENCE DATA

SPT = .7245 80.0 FT. 1000 = 12.9910 INCHES  
 LWT = 7.4828 INCHES 1000 = .0000 INCHES  
 BWT = 13.1132 INCHES 1000 = 6.0000 INCHES  
 SCALE = .0130

## PARAMETRIC DATA

BETA = .000 PO-JET = 100.000  
 RM/L = 1.000

NA-7, UPWT 1031, ROCKWELL PFR ORB. CONF. BUH41

(RPM012) (06 FEB 74)

RUN NO. 68/ 0 RM/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.400	-.00061	.25046	.05752	-.03289	.00046	.00030	.00097	5.31253	6.26445	4.36060
4.000	16.300	-.00077	.36619	.05638	-.03910	.00046	.00033	.00111	5.31253	6.26445	5.31253
4.000	20.549	-.00029	.50363	.05620	-.04738	.00051	.00057	-.00059	5.31253	6.26445	5.31253
4.000	25.662	-.00095	.60324	.05784	-.05989	.00072	.00072	.00046	4.36060	6.26445	5.31253
4.000	30.778	-.00026	.87760	.05688	-.08075	.00076	.00085	-.00106	5.31253	5.31253	5.31253
4.000	35.908	-.00011	1.06975	.05400	-.10292	.00101	.00085	-.00125	4.36060	5.31253	5.31253
	GRADIENT	.00002	.03563	-.00014	-.00298	.00002	.00003	-.00010	-.03472	-.04709	.02728

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BIAN41

(RPM013) ( 06 FEB 74 )

## REFERENCE DATA

REF = .7245 SQ.FT. YARP = 12.9510 INCHES  
LREF = 7.8828 INCHES YARP = .0000 INCHES  
BREF = 15.1152 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150

RUN NO. 70/ 0 RV/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
MACH	4.000	12.410	.25023	.05740	-.03266	.00046	.00030	.00097	6.26445	6.26445	3.40867
4.000	16.549	-.00061	.37168	.05804	-.04013	.00046	.00033	.00106	5.31253	6.26445	4.36060
4.000	20.569	-.00075	.50321	.05872	-.04757	.00051	.00078	-.00057	4.36060	6.26445	4.36060
4.000	25.690	-.00042	.67700	.05663	-.05870	.00076	.00086	-.00090	4.36060	6.26445	4.36060
4.000	30.768	-.00026	.87767	.05641	-.07883	.00076	.00085	-.00106	5.31253	5.31253	4.36060
4.000	35.891	-.00015	1.08344	.05348	-.10363	.00124	.00084	-.00114	4.36060	5.31253	3.40867
GRADIENT		.00002	.03556	-.00017	-.00295	.00003	.00003	-.00010	-.05466	-.04716	-.00246

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BIAN41

(RPM014) ( 06 FEB 74 )

## REFERENCE DATA

REF = .7245 SQ.FT. YARP = 12.9510 INCHES  
LREF = 7.8828 INCHES YARP = .0000 INCHES  
BREF = 15.1152 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150

RUN NO. 71/ 0 RV/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
MACH	4.000	12.391	.25033	.05812	-.03271	.00046	.00030	.00097	6.26445	6.26445	4.36060
4.000	16.500	-.00069	.37195	.05843	-.03829	.00046	.00054	.00108	5.31253	6.26445	4.36060
4.000	20.594	-.00100	.50694	.05901	-.04670	.00071	.00064	.00083	4.36060	6.26445	3.40867
4.000	25.882	-.00035	.68261	.05665	-.05978	.00072	.00072	.00046	4.36060	6.26445	3.40867
4.000	30.768	-.00026	.87700	.05637	-.07877	.00076	.00085	-.00106	4.36060	5.31253	4.36060
4.000	35.929	-.00011	1.08900	.05382	-.10286	.00101	.00085	-.00124	4.36060	5.31253	3.40867
GRADIENT		.00003	.03562	-.00018	-.00296	.00002	.00002	-.00011	-.07186	-.04704	-.01481

(RPM015) (06 FEB 74)

NA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BHM41

## REFERENCE DATA

SRCP = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LRCP = 7.8828 INCHES YMRP = .0000 INCHES  
BRCP = 19.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .7150

## PARAMETRIC DATA

BETA = .000 PO-JET = 600.000  
RV/L = 1.000

RUN NO. 72/ 0 RV/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	ON	-CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.460	-.00117	.25596	.05758	-.03375	.00042	.00017	.00233	6.26445	6.26445	4.36060
4.000	16.530	-.00089	.37174	.03820	-.03825	.00046	.00054	.00107	5.31253	6.26445	3.40867
4.000	20.575	-.00100	.50900	.03815	-.04672	.00071	.00064	.00084	4.36060	6.26445	3.40867
4.000	25.684	-.00093	.68863	.05721	-.06092	.00072	.00072	.00041	4.36060	6.26445	3.40867
4.000	30.804	-.00095	.88271	.05612	-.07986	.00072	.00093	.00031	4.36060	5.31253	4.36060
4.000	35.894	-.00082	1.08868	.05344	-.10280	.00097	.00092	.00017	3.40867	5.31253	4.36060
GRADIENT		.00001	.03589	-.00017	-.00296	.00002	.00003	-.00008	-.10177	-.04724	.01995



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(RPM016) ( 16 JAN 74 )

NA-7,UPWT 1031,ROCKWELL-PFR ORB. CONF. BUTNI

REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9310 INCHES  
 LREF = 7.8628 INCHES YMRP = .0000 INCHES  
 BREF = 19.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = .000  
 RN/L = 3.000

PARAMETRIC DATA

RUN NO. 15/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.155	-.00034	-.01637	.08728	-.00920	-.00008	.00029	-.00044	108.93403	124.16486	48.96283
2.900	4.111	.00132	.11155	.08401	-.02545	.00007	.00018	-.00092	104.17439	108.93403	53.72226
2.900	8.362	.00307	.23684	.08105	-.04194	.00027	.00027	-.00189	89.89549	93.70320	47.05877
2.900	12.682	.00281	.36629	.07750	-.05682	.00037	.00025	-.00178	61.33768	80.37622	40.39529
2.900	16.967	.00231	.50349	.07430	-.07174	.00043	.00044	-.00192	47.05877	66.09732	34.68372
2.900	21.300	.00172	.64945	.07078	-.08589	.00048	.00055	-.00177	31.82794	52.77034	34.68372
GRADIENT		.00039	.02999	-.00077	-.00381	.00004	-.00003	-.00011	-1.11572	-3.57028	1.11571

RUN NO. 19/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.950	-.221	-.00036	-.02462	.07996	-.01159	.00027	.00031	-.00037	74.66466	80.37622	25.16445
2.950	4.014	.00087	.08571	.07675	-.02407	.00032	.00037	-.00102	74.66466	69.90302	28.02024
2.950	8.369	.00176	.20655	.07423	-.03507	.00029	.00047	-.00166	56.57805	57.52997	24.21253
2.950	12.547	.00220	.32286	.07124	-.04634	.00048	.00044	-.00200	38.49143	48.01070	20.40482
2.950	16.765	.00215	.45280	.06894	-.06501	.00054	.00043	-.00199	27.06831	39.44336	17.54904
2.950	21.013	.00228	.59393	.06602	-.07237	.00054	.00042	-.00202	21.35675	30.87602	16.59711
GRADIENT		.00034	.02605	-.00076	-.00295	.00001	.00001	-.00015	-.00000	-2.47254	.67433

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TABULATED SOURCE DATA LARC UPWT 1031

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NA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BMTN1

(RPM017) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = -5.000 PO-JET = .000  
RN/L = 3.000

RUN NO. 18/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-1.178	-5.17613	-.01498	.08668	-.01033	-.00223	-.00071	.07813	148.91496	147.96304	46.10685
2.900	4.046	-5.16899	.10991	.08560	-.02724	-.00112	.00057	.07226	128.92450	130.82835	46.10685
2.900	6.408	-5.15995	.23870	.03140	-.04338	.00076	.00180	.06730	109.89596	114.64559	43.25107
2.900	12.710	-5.15773	.36799	.07765	-.05847	.00262	.00310	.06439	94.65512	100.36669	37.53951
2.900	17.149	-5.15733	.50895	.07391	-.07282	.00411	.00315	.0612	80.37622	85.13586	34.68372
2.900	21.293	-5.15969	.65093	.07023	-.08594	.00535	.00704	.05999	73.71273	71.80888	31.82794
GRADIENT		.00216	.02957	-.00073	-.00400	.00126	.00030	-.00139	-4.73259	-4.05651	.00000

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 187.000  
RN/L = 3.000

RUN NO. 16/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-1.190	-.00345	-.01503	.08766	-.00863	-.00008	.00033	-.00045	184.13626	51.81841	48.01070
2.900	4.107	.00145	.11419	.08431	-.02638	.00017	.00014	-.00092	172.71314	50.86648	51.81841
2.900	6.403	.00196	.23990	.08124	-.04246	.00025	.00021	-.00129	153.67460	48.01070	46.10685
2.900	12.665	.00265	.36756	.07763	-.05750	.00032	.00025	-.00180	127.02064	42.29914	39.44336
2.900	17.096	.00237	.50776	.07428	-.07209	.00043	.00044	-.00195	99.41476	33.73180	34.68372
2.900	21.303	.00203	.65126	.07071	-.08599	.00049	.00068	-.00208	79.42429	35.63565	33.73180
GRADIENT		.00044	.03007	-.00078	-.00413	.00006	-.00004	-.00011	-2.65839	-.22153	.88613

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN1

(RPM019) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = -5.000 PO-JET = 187.000  
RN/L = 3.000

RUN NO. 17/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.214	-5.17555	-.01631	.08874	-.01094	-.00222	-.00068	.07783	215.54885	59.43383	46.10685
2.900	4.136	-5.16395	.11380	.08569	-.02796	-.00104	.00068	.07163	180.32856	50.86848	45.15492
2.900	8.361	-5.15979	.23671	.08170	-.04340	.00070	.00175	.06728	152.72267	43.25107	41.34721
2.900	12.719	-5.15757	.36768	.07765	-.05849	.00256	.00305	.06439	135.58799	36.58758	36.58758
2.900	16.973	-5.15725	.50266	.07420	-.07208	.00400	.00510	.06140	121.30908	33.73180	33.73180
2.900	21.288	-5.15921	.64859	.07028	-.08548	.00552	.00707	.05976	109.88596	37.53931	30.87602
GRADIENT		.00221	.02991	-.00070	-.00391	.00029	.00031	-.00143	-8.09685	-1.96951	-.21883

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN1

(RPM020) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 157.000  
RN/L = 3.000

RUN NO. 20/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.226	-.00055	-.02310	.08005	-.01233	.00027	.00031	-.00038	125.11679	29.92409	25.16445
2.900	3.961	.00072	.08415	.07707	-.02427	.00032	.00042	-.00101	115.59752	27.06831	26.11638
2.900	6.246	.00142	.20337	.07438	-.03496	.00035	.00037	-.00161	97.51091	24.21253	24.21253
2.900	12.527	.00220	.32282	.07141	-.04683	.00048	.00044	-.00200	77.52044	18.50096	19.45289
2.900	16.847	.00274	.45418	.06881	-.06028	.00055	.00046	-.00235	55.62612	18.50096	17.54904
2.900	21.077	.00217	.59479	.06555	-.07255	.00048	.00047	-.00204	45.15492	20.40482	18.50096
GRADIENT		.00030	.02561	-.00071	-.00285	.00001	.00003	-.00015	-2.27353	-.68206	.22735

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN1

(RPM021) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 1.000

RUN NO. 1/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.416	-.00005	.24297	.06200	-.02922	.00053	.00054	-.00147	8.02977	6.12591	2.31821
4.000	16.526	-.00021	.36044	.06053	-.03430	.00032	.00051	-.00131	7.07784	6.12591	2.31821
4.000	20.559	-.00032	.49785	.06050	-.04278	.00075	.00045	-.00093	5.17399	6.12591	2.31821
4.000	25.703	-.00037	.67676	.05949	-.05512	.00047	.00065	-.00098	5.17399	6.12591	2.31821
4.000	30.767	-.00016	.87078	.05653	-.07587	.00065	.00042	-.00101	6.12591	4.22206	2.31821
4.000	35.902	.00043	1.07688	.05301	-.09886	.00081	.00078	-.00262	5.17399	4.22206	2.31821
GRADIENT		.00002	.03566	-.00036	-.00297	.00001	.00001	-.00003	-.09922	-.09425	-.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN1

(RPM022) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = -2.500 PO-JET = .000  
RN/L = 1.000

RUN NO. 8/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.391	-2.51284	.24274	.06210	-.02733	.00114	.00156	.02860	8.98170	7.07784	2.31821
4.000	16.406	-2.51291	.35945	.06115	-.03422	.00190	.00227	.02756	8.02977	6.12591	1.36628
4.000	20.969	-2.51345	.49640	.06076	-.04071	.00237	.00284	.02802	8.02977	6.12591	1.36628
4.000	25.659	-2.51336	.67558	.05899	-.05488	.00262	.00379	.02671	7.07784	5.17399	1.36628
4.000	30.764	-2.51287	.86311	.05755	-.07258	.00418	.00289	.02694	6.12591	6.12591	1.36628
4.000	35.880	-2.51157	1.07429	.05357	-.09652	.00470	.00415	.02262	8.02977	5.17399	1.36628
GRADIENT		.00004	.03546	-.00034	-.00290	.00015	.00009	-.00020	-.06693	-.06201	-.02729

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TABULATED SOURCE DATA LARC UPWT 1031

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NA-7, UPWT 1031, ROCKWELL PRR ORG. CONF. BUTN1

(RPM023) (16 JAN 74)

## REFERENCE DATA

SRGT = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BRGT = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = -5.000 PO-JET = .000  
RN/L = 1.000

RUN NO. 7/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
MACH	12.476	-5.04109	.24179	.06183	-.02720	.00235	.00304	.05998	10.88555	8.98170	2.31821
4.000	16.505	-5.04104	.35824	.06137	-.03404	.00383	.00451	.05370	9.93362	8.02977	1.36628
4.000	20.656	-5.04190	.50059	.06051	-.04149	.00503	.00547	.05429	8.98170	8.02977	1.36628
4.000	25.867	-5.04090	.66776	.05879	-.05338	.00630	.00667	.05048	8.02977	7.07784	1.36628
4.000	30.822	-5.04013	.86649	.05813	-.07325	.00839	.00854	.04934	7.07784	7.07784	1.36628
4.000	35.947	-5.03996	1.07190	.05411	-.09609	.00891	.00900	.04509	7.07784	8.98170	1.36628
GRADIENT		.00009	.03543	-.00031	-.00290	.00028	.00019	-.00044	-.17111	-.01961	-.02723

## REFERENCE DATA

SRGT = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BRGT = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 3.000

NA-7, UPWT 1031, ROCKWELL PRR ORG. CONF. BUTN1

(RPM024) (16 JAN 74)

RUN NO. 11/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
MACH	12.704	-.00438	.25423	.06076	-.03197	.00018	.00030	.00240	20.40482	17.54904	5.17399
4.000	16.886	-.00464	.37382	.05979	-.03934	.00034	.00043	.00235	17.54904	14.69326	5.17399
4.000	21.076	-.00461	.50519	.05922	-.04661	.00034	.00049	.00228	14.69326	12.78940	5.17399
4.000	26.383	-.00390	.69111	.05872	-.06044	.00034	.00052	.00178	11.83748	11.83748	5.17399
4.000	31.708	-.00346	.89174	.05684	-.08002	.00079	.00036	.00173	12.78940	13.74133	5.17399
4.000	37.056	-.00230	1.11015	.05352	-.10417	.00071	.00067	.00052	12.78940	9.93362	5.17399
GRADIENT		.00009	.03521	-.00027	-.00294	.00002	.00001	-.00007	-.31238	-.23871	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTNI

(RPM025) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 98.FT. XREF = 12.9510 INCHES  
LREF = 7.6826 INCHES YREF = .0000 INCHES  
BREF = 19.1152 INCHES ZREF = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RV/L = 5.000

RUN NO. 13/ 0 RV/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.955	-.00504	.28131	.06192	-.03215	.00044	.00033	.00151	30.87602	30.87602	8.98170
4.000	17.305	-.00427	.36513	.05937	-.04001	.00041	.00040	.00106	24.21253	25.16445	8.98170
4.000	21.604	-.00392	.52037	.05893	-.04730	.00046	.00044	.00088	23.26060	19.45289	8.98170
4.000	27.212	-.00260	.71743	.05735	-.06321	.00051	.00053	.00023	14.69326	17.54904	8.98170
GRADIENT	.00316	.00316	.03204	-.00022	-.00215	.00001	.00001	-.00009	-1.06054	-.95339	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTNI

(RPM026) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 98.FT. XREF = 12.9510 INCHES  
LREF = 7.6826 INCHES YREF = .0000 INCHES  
BREF = 19.1152 INCHES ZREF = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 35.000  
RV/L = 1.000

RUN NO. 2/ 0 RV/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.425	-.00063	.23732	.06141	-.02813	.00025	.00041	-.00008	7.07784	3.27013	2.31821
4.000	16.516	-.00077	.36023	.06054	-.03431	.00024	.00038	.00004	7.07784	3.27013	2.31821
4.000	20.566	-.00069	.49132	.06036	-.04166	.00047	.00032	.00047	8.02977	3.27013	2.31821
4.000	25.676	-.00037	.67075	.05732	-.05981	.00023	.00065	-.00099	8.98170	3.27013	2.31821
4.000	30.775	-.00071	.86466	.05586	-.07476	.00033	.00029	.00033	6.12591	3.27013	2.31821
4.000	35.869	-.00010	1.07041	.05250	-.09584	.00005	.00065	-.00132	6.12591	3.27013	2.31821
GRADIENT	.00002	.00002	.03555	-.00036	-.00290	-.00001	.00001	-.00004	-.04475	.00000	-.00000

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN1

(RPM027) ( 16 JAN 74 )

## REFERENCE DATA

REF = .7245 90.FT. XREF = 12.9510 INCHES  
LREF = 7.6626 INCHES YREF = .0000 INCHES  
BREF = 15.1132 INCHES ZREF = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 100.000  
RN/L = 3.000

RUN NO. 12/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	CN	CA	CLM	CEL	CYN	CY	PB1	PB2	PB3
MAON											
4.000	12.978	.00436	.25661	.06091	-.03135	.00026	.00030	.00240	26.02024	7.07724	5.17399
4.000	16.868	-.00464	.37443	.05993	-.03941	.00034	.00043	.00236	22.30867	6.12591	5.17399
4.000	21.111	-.00398	.50716	.05915	-.04633	.00036	.00047	.00179	22.30867	6.12591	5.17399
4.000	26.401	-.00346	.68722	.05631	-.05907	.00019	.00064	.00131	27.06831	6.12591	5.17399
4.000	31.723	-.00341	.86790	.05603	-.07929	.00039	.00037	.00168	25.16445	6.12591	5.17399
4.000	37.053	-.00249	1.10631	.05332	-.10384	.00023	.00082	.00146	15.64518	6.12591	5.17399
GRADIENT		.00006	.03496	-.00030	-.00291	-.00000	.00002	-.00007	-.28447	-.02618	-.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN1

(RPM028) ( 16 JAN 74 )

## REFERENCE DATA

REF = .7245 90.FT. XREF = 12.9510 INCHES  
LREF = 7.6626 INCHES YREF = .0000 INCHES  
BREF = 15.1132 INCHES ZREF = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 170.000  
RN/L = 5.000

RUN NO. 14/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	CN	CA	CLM	CEL	CYN	CY	PB1	PB2	PB3
MAON											
4.000	12.978	.00443	.26251	.06049	-.03199	.00040	.00036	.00121	46.96263	10.68555	9.93362
4.000	17.306	-.00429	.36513	.05938	-.03963	.00045	.00040	.00107	40.39529	9.93362	8.98170
4.000	21.636	-.00406	.52202	.05839	-.04755	.00051	.00049	.00088	42.29914	9.93362	8.98170
4.000	27.133	-.00272	.71516	.05720	-.06239	.00037	.00057	.00022	42.29914	9.93362	9.93362
GRADIENT		.00012	.03199	-.00023	-.00213	-.00000	.00002	-.00007	-.36807	-.03866	.00514

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTNI (RPM029) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 90.JT. YMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 SREF = 15.1132 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0190

## PARAMETRIC DATA

BETA = .000 PO-JET = 188.000  
 RN/L = 1.000

RUN NO. 3/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.428	.23741	.06085	-.02624	-.00003	.00027	.00127	32.77987	3.27013	2.31821
4.000	16.533	.35424	.05981	-.03318	-.00004	.00024	.00144	28.02024	3.27013	2.31821
4.000	20.544	.48571	.05860	-.04053	-.00020	.00068	-.00104	20.40482	3.27013	2.31821
4.000	25.709	.66469	.05763	-.05292	-.00100	.00096	.00022	11.83748	3.27013	2.31821
4.000	30.791	.83276	.05519	-.07260	-.00086	.00074	.00018	7.07784	3.27013	2.31821
4.000	35.896	1.06432	.05177	-.09668	-.00119	.00096	-.00011	6.12591	3.27013	2.31821
GRADIENT	.00001	.03525	-.00037	-.00295	-.00006	.00003	-.00005	-1.22827	.00000	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTNI

(RPM030) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 90.JT. YMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 SREF = 15.1132 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0190

## PARAMETRIC DATA

BETA = .000 PO-JET = 310.000  
 RN/L = 1.000

RUN NO. 4/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.448	.23728	.06010	-.02620	-.00007	.00013	.00267	35.63565	3.27013	2.31821
4.000	16.364	.35428	.05875	-.03125	-.00027	.00025	.00138	27.06831	3.27013	2.31821
4.000	20.537	.49172	.05868	-.03982	-.00123	.00064	.00152	12.78940	3.27013	2.31821
4.000	25.644	.66516	.05744	-.05300	-.00199	.00127	.00144	9.93362	3.27013	2.31821
4.000	30.845	.86440	.05535	-.07110	-.00165	.00069	.00275	7.07784	2.31821	2.31821
4.000	35.899	1.06440	.05180	-.09294	-.00174	.00090	.00260	6.12591	2.31821	2.31821
GRADIENT	.00003	.03543	-.00032	-.00285	-.00008	.00003	.00003	-1.24133	-0.04724	.00000



NA-7,UPJT 1031,ROCKWELL PER ORG. CONF. BUTNI

REFERENCE DATA

SPOT = .7245 90.FT. 100P = 12.9510 INCHES  
LWOT = 7.0000 INCHES 100P = .0000 INCHES  
SPOT = 15.1152 INCHES 100P = 6.0000 INCHES  
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 PO-JET = 310.000  
RW/L = 1.000

RUN NO. 9/ 0 RW/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

ALPHA	BETA	ON	CA	CLM	CLB	CYN	CY	PB1	PB2	PB3
4.000	12.400	5.04600	.23822	-.08161	-.02477	-.00449	-.04685	36.50750	3.27013	2.31821
4.000	16.300	5.04605	.36224	.00034	-.03294	-.00820	-.04573	34.69326	3.27013	2.31821
4.000	20.500	5.04650	.49400	.08006	-.04043	-.00898	-.04417	8.98170	2.31821	1.36628
4.000	25.000	5.04682	.66749	.05317	-.05362	-.00903	-.04299	6.12591	2.31821	1.36628
4.000	30.705	5.04593	.85606	.05748	-.06965	-.01012	-.04811	5.17399	2.31821	1.36628
4.000	35.867	5.04526	1.06709	.05340	-.09253	-.01077	-.03623	4.22206	2.31821	2.31821
GRADIENT		-.00006	.03322	-.00032	-.00261	-.00027	.00036	-1.13161	-.04465	-.01483

NA-7,UPJT 1031,ROCKWELL PER ORG. CONF. BUTNI (RPM032) ( 16 JAN 74 )

REFERENCE DATA

SPOT = .7245 90.FT. 100P = 12.9510 INCHES  
LWOT = 7.0000 INCHES 100P = .0000 INCHES  
SPOT = 15.1152 INCHES 100P = 6.0000 INCHES  
SCALE = .0150

PARAMETRIC DATA

BETA = -2.500 PO-JET = 310.000  
RW/L = 1.000

RUN NO. 9/ 0 RW/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

ALPHA	BETA	ON	CA	CLM	CLB	CYN	CY	PB1	PB2	PB3
4.000	12.410	-2.51328	.24274	-.08196	-.02733	.00110	.02999	36.50750	4.22206	1.36628
4.000	16.327	-2.51344	.39955	.08087	-.03235	.00136	.02885	29.92409	3.27013	1.36628
4.000	20.575	-2.51360	.48476	.05044	-.03845	.00185	.02939	36.50750	3.27013	1.36628
4.000	25.679	-2.51367	.67009	.05712	-.05194	.00295	.02642	15.64518	3.27013	1.36628
4.000	30.732	-2.51365	.85766	.05645	-.06972	.00364	.02802	7.07784	2.31821	1.36628
4.000	35.909	-2.51241	1.06298	.05219	-.09256	.00469	.02368	6.12591	2.31821	1.36628
GRADIENT		.00002	.03509	-.00038	-.00276	.00014	-.00023	-1.47875	-.07445	.00000

NA-7,UPWT 1031,ROCKWELL PER ORB. CONF. BAFTH

(RPM033) ( 16 JAN 74 )

## REFERENCE DATA

9827 = .7245 30.FT. 100P = 12.9510 INCHES  
 1007 = 7.6628 INCHES 100P = .0000 INCHES  
 9827 = 15.1132 INCHES 200P = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = -5.000 PO-JET = 310.000  
 RM/L = 1.000

RUN NO. 6/ 0 RM/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CLB	CYN	CY	FB1	FB2	FB3
4.000	12.436	-5.04052	.24181	.06155	-.02718	.00259	.00318	.05458	43.25107	3.27013	2.31821
4.000	16.536	-5.04086	.36418	.06114	-.03514	.00359	.00431	.05359	36.49143	3.27013	2.31821
4.000	25.642	-5.04190	.49477	.06003	-.04040	.00479	.00548	.05428	29.92409	3.27013	2.31821
4.000	25.657	-5.04083	.68814	.05714	-.05151	.00511	.00691	.05022	34.68372	3.27013	2.31821
4.000	30.781	-5.03982	.89379	.05621	-.07116	.00629	.00736	.04781	15.64518	3.27013	1.56628
4.000	35.886	-5.03911	1.06088	.05221	-.09239	.00677	.00847	.04472	11.83748	3.27013	2.31821
GRADIENT		.00207	.03491	-.00039	-.00272	.00318	.00322	-.00044	-1.34383	.00000	-.01736

NA-7,UPWT 1031,ROCKWELL PER ORB. CONF. BAFTH

(RPM034) ( 16 JAN 74 )

## REFERENCE DATA

9827 = .7245 30.FT. 100P = 12.9510 INCHES  
 1007 = 7.6628 INCHES 100P = .0000 INCHES  
 9827 = 15.1132 INCHES 200P = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 537.000  
 RM/L = 3.000

RUN NO. 912/ 0 RM/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CLB	CYN	CY	FB1	FB2	FB3
4.000	12.717	-.00485	.25681	.06067	-.03134	.00024	.00086	.00287	73.71273	6.12591	6.12591
4.000	16.899	-.00450	.37445	.05933	-.03675	.00034	.00036	.00235	76.56851	6.12591	6.12591
4.000	21.129	-.00514	.50322	.05615	-.04593	.00017	.00045	.00271	53.72226	7.07784	7.07784
4.000	25.348	-.00410	.68550	.05755	-.05873	-.00078	.00108	.00117	35.63565	6.12591	6.12591
4.000	31.680	-.00416	.88829	.05553	-.07836	-.00065	.00089	.00151	18.50096	6.12591	5.17399
4.000	37.039	-.00414	1.10277	.05276	-.10219	-.00091	.00111	.00124	10.88555	6.12591	5.17399
GRADIENT		.00004	.03465	-.00030	-.00287	-.00006	.00034	-.00007	-2.96026	-.00720	-.05274

NA-7, UPUT 1031, ROCKWELL PER ORG. CONF. BUTNI

REFERENCE DATA

SPOT = .7245 INCHES 198P = 12.9310 INCHES  
 LADY = 7.8828 INCHES 198P = .0000 INCHES  
 SPOT = 15.1152 INCHES 298P = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 600.000  
 RW/L = 1.000

PARAMETRIC DATA

RUN NO. 10/ 0 RW/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NAME	ALPHA	BETA	ON	CA	CLN	COL	CYN	CY	FB1	FB2	FB3
4.000	12.418	-.00336	.23785	.06033	-.02447	-.00139	-.00025	.00661	34.68372	3.27013	1.36628
4.000	16.503	-.00367	.34923	.05888	-.02851	-.00234	.00037	.00665	21.35675	3.27013	1.36628
4.000	20.678	-.00419	.46640	.05628	-.03697	-.00283	.00075	.00669	11.83748	3.27013	1.36628
4.000	25.087	-.00461	.60033	.05680	-.04829	-.00382	.00159	.00677	8.98170	2.31821	1.36628
4.000	30.762	-.00504	.85375	.05534	-.06719	-.00505	.00023	.00961	6.12591	2.31821	1.36628
4.000	35.957	-.00546	1.08516	.05251	-.09131	-.00553	.00116	.00849	5.17399	2.31821	1.36628
GRADIENT		-.00004	.00329	-.00031	-.00262	-.00006	.00004	.00005	-1.15408	-.05197	.00000

(SPM036) ( 16 JAN 74 )

NA-7, UPUT 1031, ROCKWELL PRB ORB. CONF. BMTM

## REFERENCE DATA

WGT = .7245 LB/FT. WWP = 12.9510 INCHES  
LWT = 7.8828 INCHES WWP = .0000 INCHES  
WGT = 18.1152 INCHES WWP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RW/L = 3.000

RUN NO. 37/ 0 RW/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

WAGON	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
2.900	-.216	.00140	-.01998	.08722	-.00819	-.00018	.00035	-.00113	105.86689	129.66486	53.51070
2.900	4.090	.00295	.10861	.08419	-.02567	.00010	.00019	-.00146	101.10705	111.57825	56.36648
2.900	8.460	.00360	.23795	.08107	-.04285	.00022	.00025	-.00212	85.87622	95.39549	48.75107
2.900	12.695	.00431	.36432	.07751	-.05692	.00034	.00032	-.00245	60.17419	82.06851	45.99143
2.900	16.982	.00346	.50201	.07429	-.07159	.00027	.00027	-.00195	44.94336	67.78961	35.42409
2.900	21.308	.00361	.64999	.07581	-.08611	.00026	.00039	-.00213	30.66445	53.51070	35.42409
GRADIENT		.00027	.03000	-.00071	-.00408	.00007	-.00004	-.00038	-1.11051	-4.21993	.66630

RUN NO. 39/ 0 RW/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

WAGON	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
2.900	-.182	.00031	-.02428	.08012	-.01173	.00026	.00021	-.00045	71.59732	83.97237	27.80867
2.900	4.089	.00157	.08384	.07701	-.02458	.00028	.00034	-.00129	72.54924	72.54924	28.76060
2.900	8.363	.00131	.20446	.07459	-.03590	.00022	.00037	-.00119	55.41456	59.22226	25.90482
2.900	12.671	.00206	.32324	.07138	-.04649	.00040	.00022	-.00137	36.37602	48.75107	24.00796
2.900	16.789	.00257	.45020	.06893	-.06020	.00041	.00025	-.00165	26.89675	41.13565	19.24133
2.900	21.026	.00295	.59210	.06608	-.07290	.00054	.00040	-.00200	20.19326	32.56831	19.24133
GRADIENT		.00030	.02346	-.00073	-.00303	.00000	.00003	-.00020	.22414	-2.68969	.22414

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TABULATED SOURCE DATA LARC UPWT 1031

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NA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BMTN4

(RPM037) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 151.000  
RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 40/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.950	-.234	-.00029	-.03008	.07732	-.00860	.00013	.00017	-.00008	72.54924	84.92429	32.56831
2.950	4.046	.00118	.07963	.07458	-.02128	.00003	.00026	-.00097	74.45310	72.54924	32.56831
2.950	8.207	.00012	.19590	.07269	-.03237	.00001	.00030	-.00046	56.36848	59.22226	28.78060
2.950	12.485	.00145	.31293	.06875	-.04301	.00015	.00018	-.00100	36.37602	48.75107	26.85675
2.950	16.770	.00164	.44743	.06628	-.05669	.00009	.00014	-.00099	25.90482	41.15565	23.04904
2.950	21.034	.00095	.58634	.06342	-.06840	-.00016	.00022	-.00069	21.14518	33.52024	23.04904
GRADIENT		.00034	.02563	-.00064	-.00296	-.00002	.00002	-.00021	.44483	-2.89137	.00000

NA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BMTN4

(RPM038) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 185.000  
RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 38/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.174	.00078	-.02388	.08457	-.00983	-.00019	.00032	-.00079	104.91476	129.66486	57.31841
2.900	4.069	.00225	.10226	.08174	-.02266	-.00013	.00007	-.00115	102.05898	111.57825	55.41456
2.900	8.332	.00291	.23016	.07953	-.03963	-.00001	.00009	-.00149	87.78007	96.34742	48.75107
2.900	12.641	.00289	.35751	.07515	-.05301	.00004	.00013	-.00152	60.17419	83.02044	45.81179
2.900	16.985	.00307	.49577	.07143	-.06773	-.00006	.00020	-.00166	44.94336	67.78961	43.03951
2.900	21.268	.00273	.64131	.06781	-.08095	-.00044	.00030	-.00159	33.52024	60.17419	43.03951
GRADIENT		.00035	.02973	-.00067	-.00401	.00001	-.00006	-.00008	-.67306	-4.26069	-.44870

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTM4

(RPH039) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

ALPHA = 27.500  
RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 830/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	PO-JET	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	-.547	-.00267	.79566	.05874	-.06990	.00035	.00087	.00517	5.91435	5.91435	4.01050
4.000	-.092	-.00210	.79633	.05836	-.06996	.00039	.00101	.00377	4.01050	4.01050	4.01050
4.000	39.131	-.00279	.79083	.05595	-.06688	-.00013	.00109	.00513	4.96243	4.96243	4.01050
4.000	196.760	-.00245	.78026	.04892	-.05376	.00511	.00511	-.00106	4.96243	4.96243	4.01050
4.000	327.310	-.00276	.76885	.04340	-.04471	.00575	.00575	-.00115	4.01050	4.96243	4.01050
4.000	601.246	-.00320	.75179	.03212	-.03565	-.03523	.00559	.00026	4.01050	4.01050	4.01050
	GRADIENT	.00125	.00147	-.00084	-.00013	.00009	.00031	-.00308	-4.18429	-4.18429	.00000

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = .000  
RN/L = 1.000

## PARAMETRIC DATA

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTM4

(RPH040) ( 16 JAN 74 )

RUN NO. 26/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.447	-.00120	.24425	.06302	-.02994	.00042	.00016	.00242	8.77013	7.81821	4.96243
4.000	16.485	-.00079	.36149	.06228	-.03703	.00044	.00029	.00150	7.81821	6.86628	4.96243
4.000	20.642	-.00089	.50129	.06172	-.04491	.00067	.00033	.00186	6.86628	6.86628	4.96243
4.000	25.646	-.00096	.67806	.05904	-.05987	.00044	.00058	.00186	5.91435	6.86628	4.96243
4.000	30.766	-.00059	.87508	.05698	-.08077	.00091	.00015	.00180	5.91435	6.86628	4.01050
4.000	35.892	-.00012	1.08561	.05304	-.10478	.00096	.00071	.00019	5.91435	5.91435	4.01050
	GRADIENT	.00004	.00598	-.00042	-.00318	.00002	.00002	-.00006	-.12418	-.05717	-.04722

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN4

(RPM041) ( 16 JAN 74 )

## REFERENCE DATA

SRF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LRF = 7.8628 INCHES YMRP = .0000 INCHES  
BRF = 15.1192 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = -2.500 PO-JET = .000  
RN/L = 1.000

RUN NO. 34/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.434	-2.51257	.25533	.06127	-.03004	.00187	.00200	.02837	8.77013	7.81821	4.01050
4.000	16.513	-2.51333	.37803	.06077	-.03815	.00258	.00281	.02902	7.81821	7.81821	4.01050
4.000	20.576	-2.51316	.51758	.06026	-.04788	.00310	.00340	.02803	6.86628	6.86628	4.01050
4.000	25.713	-2.51365	.70377	.05940	-.06214	.00335	.00428	.02810	5.91435	6.86628	4.01050
4.000	30.775	-2.51315	.89068	.05683	-.07982	.00525	.00537	.02841	5.91435	6.86628	4.01050
4.000	35.928	-2.51181	1.10695	.05218	-.10295	.00562	.00463	.02402	6.86628	5.91435	4.01050
GRADIENT		.00003	.03625	-.00036	-.00907	.00016	.00009	-.00015	-.09414	-.07441	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN4

(RPM042) ( 16 JAN 74 )

## REFERENCE DATA

SRF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LRF = 7.8628 INCHES YMRP = .0000 INCHES  
BRF = 15.1192 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = -5.000 PO-JET = .000  
RN/L = 1.000

RUN NO. 31/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.474	-5.04082	.26044	.06254	-.03108	.00353	.00348	.05583	10.67399	9.72206	4.01050
4.000	16.543	-5.04132	.37733	.06158	-.03805	.00452	.00484	.05521	10.67399	8.77013	4.01050
4.000	20.673	-5.04205	.52259	.06115	-.04882	.00572	.00570	.05579	8.77013	8.77013	4.01050
4.000	25.667	-5.04107	.69724	.05923	-.06078	.00704	.00717	.05194	7.81821	7.81821	4.01050
4.000	30.753	-5.04042	.89971	.05803	-.07953	.00923	.00703	.05087	6.86628	7.81821	4.01050
4.000	35.916	-5.03925	1.10612	.05389	-.10268	.01039	.00849	.04659	6.86628	8.77013	4.01050
GRADIENT		.00007	.03613	-.00034	-.00302	.00029	.00020	-.00039	-.18904	-.04958	.00000

MA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BMTNA

(RPM043) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1192 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0190

BETA = .000 PO-JET = .000  
RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 21/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAOH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.676	-.00069	.25618	.06063	-.03331	.00040	.00040	-.00002	21.14518	20.19326	7.81821
4.000	16.865	-.00083	.37388	.05956	-.04145	.00056	.00047	.00003	17.33748	16.36555	7.81821
4.000	21.079	-.00062	.50918	.05896	-.04921	.00057	.00050	-.00008	14.48170	14.48170	7.81821
4.000	26.380	-.00001	.69695	.05837	-.06299	.00051	.00061	-.00061	11.62591	14.48170	7.81821
4.000	31.711	-.00069	.90408	.05605	-.08436	.00104	.00036	.00026	11.62591	14.48170	7.81821
4.000	37.049	.00109	1.12400	.05300	-.10886	.00093	.00072	-.00143	11.62591	11.62591	7.81821
GRADIENT		.00006	.03575	-.00029	-.00306	.00002	.00001	-.00004	-.38384	-.27670	.00000

MA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BMTNA

(RPM044) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1192 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0190

BETA = .000 PO-JET = .000  
RN/L = 5.000

## PARAMETRIC DATA

RUN NO. 24/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MAOH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.962	-.00025	.26458	.06022	-.03322	.00041	.00040	.00087	29.71253	32.56831	12.57784
4.000	17.299	-.00013	.38722	.05906	-.04095	.00051	.00044	.00078	23.04904	25.90482	11.62591
4.000	21.635	-.00026	.52571	.05827	-.04901	.00047	.00047	.00055	22.09711	21.14518	11.62591
4.000	27.151	-.00187	.71905	.05708	-.06445	.00058	.00053	.00022	15.43362	19.24135	11.62591
GRADIENT		.00010	.03211	-.00022	-.00219	.00001	.00001	-.00005	-.93624	-.93707	-.05862



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TABULATED SOURCE DATA LARC UPWT 1031

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NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BW1N4

(RPM045) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 19.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0190

BETA = .000 PO-JET = 37.000  
RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 27/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.433	-.00048	.23260	.05972	-.02371	-.00003	.00009	.00098	6.86628	7.81821	4.01050
4.000	16.513	-.00062	.35546	.05921	-.03389	-.00004	.00009	.00142	6.86628	6.86628	4.01050
4.000	20.577	-.00075	.49515	.05929	-.04369	.00019	.00013	.00178	5.91435	7.81821	4.01050
4.000	25.631	-.00092	.67508	.05659	-.05976	-.00004	.00060	.00176	5.91435	6.86628	4.96243
4.000	30.775	-.00071	.86897	.05462	-.07763	.00044	.00036	.00175	5.91435	5.91435	4.01050
4.000	35.913	.00024	1.07893	.04056	-.10164	.00005	.00129	-.00135	4.96243	5.91435	4.96243
GRADIENT		.00002	.03605	-.00038	-.00320	.00001	.00004	-.00007	-.07439	-.08176	.03495

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BW1N4

(RPM046) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 19.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0190

BETA = .000 PO-JET = 99.000  
RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 35/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.416	-.00253	.25048	.05594	-.02317	-.00037	.00032	.00503	7.81821	7.81821	4.01050
4.000	16.522	-.00293	.36767	.05523	-.03029	-.00066	.00074	.00543	6.86628	7.81821	4.01050
4.000	20.617	-.00285	.50735	.05448	-.04005	-.00082	.00156	.00438	5.91435	6.86628	4.01050
4.000	25.698	-.00282	.68809	.05242	-.05331	-.00173	.00281	.00282	4.96243	4.96243	4.01050
4.000	30.777	-.00245	.88707	.05124	-.07335	-.00125	.00238	.00276	4.96243	4.96243	4.01050
4.000	35.914	-.00183	1.09754	.04723	-.09737	-.00144	.00274	.00110	4.01050	4.96243	4.01050
GRADIENT		.00003	.03624	-.00035	-.00313	-.00004	.00011	-.00018	-.15385	-.14879	.00000

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TABULATED : JRCE DATA LARC UPWT 1031

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN4

(RPM047) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 103.000  
 RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 22/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACN	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	FB1	FB2	FB3
4.000	12.674	-.00150	.25285	.05690	-.03066	.00006	.00017	.00086	18.28940	19.24133	9.72206
4.000	16.908	-.00099	.37219	.05724	-.03787	-.00001	.00030	.00038	16.38555	16.38555	8.77013
4.000	21.069	-.00154	.50633	.05685	-.04596	.00006	.00034	.00077	12.57784	14.48170	9.72206
4.000	26.454	-.00135	.69426	.05695	-.06038	.00000	.00067	.00026	13.52977	14.48170	8.77013
4.000	31.720	-.00015	.90037	.05416	-.08168	.00050	.00049	-.00029	11.62591	11.62591	8.77013
4.000	37.130	.00155	1.12218	.05113	-.10856	.00024	.00126	-.00247	11.62591	11.62591	8.77013
GRADIENT		.00011	.03568	-.00028	-.00308	.00001	.00004	-.00011	-.26380	-.29976	-.03343

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN4

(RPM048) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 178.000  
 RN/L = 5.000

## PARAMETRIC DATA

RUN NO. 25/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACN	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	FB1	FB2	FB3
4.000	12.928	-.00410	.25886	.05793	-.03013	.00016	.00028	.00142	28.76060	32.56831	15.43362
4.000	17.287	-.00317	.38276	.05676	-.03754	.00007	.00030	.00100	22.09711	26.85675	14.48170
4.000	21.649	-.00287	.52072	.05597	-.04574	-.00002	.00041	.00077	20.19326	22.09711	14.48170
4.000	27.154	-.00145	.71359	.05484	-.06139	.00001	.00065	-.00013	21.14518	25.90482	14.48170
GRADIENT		.00018	.03800	-.00021	-.00319	-.00001	.00003	-.00011	-.50559	-.49579	-.05952

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTM4

(RPM049) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. YARP = 12.9510 INCHES  
LREF = 7.8628 INCHES YARP = .0000 INCHES  
BREF = 15.1152 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 199.000  
RN/L = 1.000

RUN NO. 28/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.421	-.00119	.22128	.05180	-.01945	-.00168	.00138	.00076	6.86628	7.81821	4.01050
4.000	16.539	-.00095	.33838	.05105	-.02465	-.00208	.00272	-.00161	6.86628	6.86628	4.01050
4.000	20.562	-.00040	.47833	.05079	-.03452	-.00295	.00412	-.00425	5.91435	5.91435	4.01050
4.000	23.663	-.00012	.65883	.04915	-.04776	-.00362	.00495	-.00577	4.96243	4.96243	4.01050
4.000	30.808	-.00006	.85720	.04758	-.06770	-.00232	.00302	-.00147	4.96243	4.96243	4.01050
4.000	35.958	-.00050	1.06711	.04411	-.09162	-.00137	.00258	-.00150	4.01050	4.96243	4.01050
GRADIENT		.00002	.03613	-.00031	-.00307	.00001	.00004	-.00006	-.12623	-.12366	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTM4

(RPM050) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. YARP = 12.9510 INCHES  
LREF = 7.8628 INCHES YARP = .0000 INCHES  
BREF = 15.1152 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 328.000  
RN/L = 1.000

RUN NO. 29/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.394	-.00046	.21824	.04516	-.01064	-.00412	.001473	-.00525	6.86628	7.81821	4.01050
4.000	16.500	-.00025	.33389	.04396	-.01775	-.00476	.00629	-.00767	6.86628	6.86628	4.96243
4.000	20.540	-.00105	.46795	.04478	-.02655	-.00505	.00641	-.00594	4.95243	5.91435	4.01050
4.000	23.676	-.00063	.65445	.04406	-.03904	-.00548	.00703	-.00746	4.96243	4.96243	4.01050
4.000	30.784	-.00182	.84699	.04164	-.05966	-.00308	.00352	-.00011	4.01050	4.96243	4.01050
4.000	35.869	-.00086	1.05762	.03795	-.08173	-.00232	.00322	-.00160	4.01050	4.96243	4.01050
GRADIENT		-.00014	.03596	-.00027	-.00301	.00009	-.00010	.00025	-.13625	-.12391	-.01730

(RPM051) ( 16 JAN 74 )

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTM4

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = -2.500 PO-JET = 328.000  
 RN/L = 1.000

RUN NO. 33/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
MAOH	12.469	.23333	.04571	-.01192	-.00227	.00987	.02354	8.77013	9.72206	4.01050
4.000	16.999	.35037	.04460	-.01707	-.00219	.00761	.02130	9.72206	9.72206	4.01050
4.000	20.657	.49029	.04380	-.02501	-.00305	.00985	.01871	8.77013	8.77013	4.01050
4.000	25.696	.67060	.04323	-.04010	-.00234	.00987	.01887	6.86628	6.86628	4.01050
4.000	30.793	.86309	.04151	-.05879	.00066	.00718	.02214	4.96243	4.96243	4.01050
4.000	35.875	1.07353	.03851	-.08273	.00190	.00709	.02076	4.01050	4.96243	4.01050
GRADIENT	.00003	.03602	-.00028	-.00303	.00019	.00002	-.00006	-.24631	-.24388	.00000

(RPM052) ( 16 JAN 74 )

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTM4

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = -5.000 PO-JET = 328.000  
 RN/L = 1.000

RUN NO. 32/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
MAOH	12.478	.23273	.04603	-.01185	-.00121	.00862	.04671	10.67399	10.67399	4.01050
4.000	16.991	.35526	.04519	-.01803	-.00045	.00979	.04597	10.67399	10.67399	4.01050
4.000	20.732	.49094	.04359	-.02780	-.00008	.01214	.04224	10.67399	9.72206	4.01050
4.000	25.747	.68343	.04340	-.03865	.00163	.01247	.04132	7.81821	6.86628	4.01050
4.000	30.768	.85618	.04269	-.05740	.00425	.01176	.04176	6.86628	5.91435	4.01050
4.000	35.897	1.07212	.03939	-.08239	.00596	.01123	.04040	5.91435	4.96243	4.01050
GRADIENT	.00007	.03580	-.00026	-.00296	.00032	.00011	-.00027	-.23423	-.27920	.00000

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TABULATED SOURCE DATA LARC UPWT 1031

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NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BWTHA

(RPM053) (16 JAN 74)

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1132 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .0000 PO-JET = 599.000  
RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 23/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.655	-.00310	.24554	.05125	-.02323	-.00108	.00045	.00162	18.28940	20.19326	9.72206
4.000	16.879	-.00257	.36574	.03024	-.02595	-.00205	.00172	-.00041	17.33748	19.24133	9.72206
4.000	21.079	-.00245	.49757	.04648	-.05637	-.00308	.00363	-.00256	15.43362	14.48170	10.67399
4.000	26.403	-.00219	.68772	.04835	-.05126	-.00391	.00470	-.00453	11.62591	12.57784	10.67399
4.000	31.733	-.00268	.89167	.04695	-.07154	-.00285	.00357	-.00261	10.67399	11.62591	10.67399
4.000	37.047	-.00233	1.10949	.04456	-.09566	-.00237	.00335	-.00275	10.67399	11.62591	9.72206
GRADIENT		.00003	.03555	-.00025	-.00295	-.00005	.00012	-.00017	-.35785	-.38625	.01421

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BWTHA

(RPM054) (16 JAN 74)

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1132 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .0000 PO-JET = 600.000  
RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 30/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.469	-.00022	.20026	.03380	.00426	-.00880	.01114	-.01433	6.86628	7.81821	4.01050
4.000	16.541	-.00008	.32315	.03395	-.00396	-.00857	.01170	-.01525	6.86628	6.86628	4.01050
4.000	20.607	-.00124	.46285	.03409	-.01188	-.00823	.01026	-.01066	4.96243	4.96243	4.01050
4.000	25.694	-.00209	.65475	.03445	-.02726	-.00650	.00739	-.00484	4.01050	4.96243	4.01050
4.000	30.917	-.00249	.85295	.03184	-.04711	-.00449	.00481	-.00040	4.01050	4.96243	4.01050
4.000	35.896	-.00179	1.05815	.02895	-.07004	-.00421	.00494	-.00193	4.01050	4.96243	4.01050
GRADIENT		-.00009	.03680	-.00019	-.00315	.00022	-.00033	.00068	-.14136	-.11651	.00000

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TABULATED SOURCE DATA LAFC UPMT 1931

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MA-7,UPMT 1931,ROCKWELL PRR ORB. CONF. BUTNAD

(RPM055) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 50.FT. YMRP = 12.9310 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES YMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 3.000

RUN NO. 41/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLN	CBL	CYN	CY	FB1	FB2	FB3
2.900	-.195	.00122	-.01901	.08734	-.00880	-.00007	.00039	-.00105	105.58210	129.18028	53.97804
2.900	4.055	.00341	.10637	.08403	-.02567	-.00001	.00010	-.00154	101.57439	110.14174	56.83383
2.900	6.440	.00448	.23675	.08102	-.04220	.00028	.00024	-.00232	85.59164	93.00705	52.07419
2.900	12.665	.00459	.36271	.07749	-.05621	.00029	.00029	-.00267	58.73768	79.68007	45.41070
2.900	16.992	.00404	.51134	.07443	-.07163	.00029	.00035	-.00246	43.50685	65.40117	37.79529
2.900	21.468	.00528	.65425	.07089	-.08642	.00025	.00055	-.00316	31.13180	52.07419	36.84336
GRADIENT		.00052	.02990	-.00078	-.00397	.00001	-.00007	-.00012	-.89593	-4.47966	.67195

RUN NO. 43/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLN	CBL	CYN	CY	FB1	FB2	FB3
2.900	-.214	.00021	-.02015	.07982	-.01202	.00026	.00026	-.00040	72.06466	83.48778	28.27602
2.900	4.006	.00175	.06720	.07705	-.02474	.00027	.00026	-.00104	72.06466	71.11273	29.22794
2.900	6.273	.00186	.20482	.07472	-.03556	.00028	.00041	-.00140	53.97804	57.78575	26.37216
2.900	12.509	.00193	.32320	.07180	-.04651	.00041	.00034	-.00160	35.89143	48.26648	23.51638
2.900	16.742	.00093	.45553	.06948	-.06043	.00039	.00021	-.00087	23.51638	38.74721	18.75675
2.900	21.032	.00144	.59804	.06652	-.07348	.00057	.00027	-.00105	18.75675	31.13180	19.70867
GRADIENT		.00036	.02544	-.00066	-.00301	.00000	.00000	-.00015	.00000	-2.93248	.22557



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TABULATED SOURCE DATA LARC UPUT 1031

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NA-7,UPUT 1031,ROCKWELL PRR ORB. CONF. BUTM40

(RPM036) ( 16 JAN 74 )

## REFERENCE DATA

SRCT = 7245 30.FT. YMRP = 12.9510 INCHES  
LACT = 7.8828 INCHES YMRP = .0000 INCHES  
SRCT = 15.1132 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 131.000  
RM/L = 3.000

## PARAMETRIC DATA

RUN NO. 44/ 0 RM/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CLL	CYN	CY	PB1	PB2	PB3
2.900	-.263	-.00078	-.02444	.07777	-.00968	.00005	.00014	.00029	71.11273	84.43971	30.17987
2.900	4.190	.00058	.09050	.01475	-.02233	.00007	.00025	-.00039	72.06466	70.16080	31.13180
2.900	8.263	.00078	.20189	.07273	-.03205	.00002	.00034	-.00073	55.88190	57.78575	29.22794
2.900	12.478	.00196	.31888	.08933	-.04319	.00017	.00034	-.00162	35.89143	47.31436	26.37216
2.900	16.896	.00215	.45464	.06892	-.05677	.00017	.00028	-.00162	24.46831	39.69914	23.51638
2.900	21.068	.00388	.59126	.06412	-.06875	-.00016	.00030	-.00079	20.68060	33.98758	23.31638
GRADIENT		.00031	.02577	-.00068	-.00284	.00000	.00002	-.00015	.21377	-3.20658	.21377

NA-7,UPUT 1031,ROCKWELL PRR ORB. CONF. BUTM40

(RPM037) ( 16 JAN 74 )

## REFERENCE DATA

SRCT = 7245 30.FT. YMRP = 12.9510 INCHES  
LACT = 7.8828 INCHES YMRP = .0000 INCHES  
SRCT = 15.1132 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 198.000  
RM/L = 3.000

## PARAMETRIC DATA

RUN NO. 42/ 0 RM/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CLL	CYN	CY	PB1	PB2	PB3
2.900	-.186	.00222	-.02151	.06507	-.00567	-.00017	.00028	-.00138	104.43018	128.22835	56.83383
2.900	4.070	.00350	.10657	.06192	-.02305	-.00022	.00011	-.00159	101.57439	109.18981	56.83383
2.900	8.357	.00454	.23290	.07940	-.03926	.00001	.00024	-.00235	88.24742	93.00705	50.17034
2.900	12.626	.00412	.36055	.07546	-.05315	-.00004	.00026	-.00241	59.68961	79.68007	46.36263
2.900	16.977	.00393	.50053	.07214	-.06839	-.00026	.00024	-.00226	43.50685	65.40117	42.55492
2.900	21.291	.00267	.64462	.0637	-.08116	-.00043	.00036	-.00167	32.08372	59.68961	42.55492
GRADIENT		.00030	.03010	-.00074	-.00408	-.00001	-.00004	-.00005	-.67116	-4.47439	-.00000

REFERENCE DATA

9007 = .7245 90.FT. 100P = 12.9510 INCHES

1007 = 7.6826 INCHES 100P = .0000 INCHES

2007 = 15.1152 INCHES 200P = 6.0000 INCHES

SCALE = .0150

BETA = .000

PO-JET = .000

RN/L = 1.000

PARAMETRIC DATA

RUN NO. 48/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
MA04	12.672	-.00043	.25423	.08040	-.03356	.00041	.00034	-.00029	17.80482	18.75675	7.33362
4.000	16.915	-.00008	.37392	.05961	-.04160	.00043	.00034	-.00080	14.94904	15.90096	7.33362
4.000	21.073	.00007	.30362	.05896	-.04930	.00031	.00050	-.00064	13.04518	13.99711	7.33362
4.000	26.521	.00084	.89406	.05627	-.06366	.00053	.00054	-.00130	9.23748	13.99711	7.33362
4.000	31.713	.00063	.69336	.05642	-.06401	.00100	.00030	-.00124	9.23748	13.99711	7.33362
4.000	37.108	.00233	1.11540	.05350	-.10847	.00091	.00084	-.00330	11.14133	11.14133	7.33362
GRADIENT		.00010	.03356	-.00026	-.00303	.00002	.00001	-.00010	-.30743	-.25021	.00000

REFERENCE DATA

9007 = .7245 90.FT. 100P = 12.9510 INCHES

1007 = 7.6826 INCHES 100P = .0000 INCHES

2007 = 15.1152 INCHES 200P = 6.0000 INCHES

SCALE = .0150

BETA = .000

PO-JET = .000

RN/L = 3.000

PARAMETRIC DATA

RUN NO. 45/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
MA04	12.672	-.00043	.25423	.08040	-.03356	.00041	.00034	-.00029	17.80482	18.75675	7.33362
4.000	16.915	-.00008	.37392	.05961	-.04160	.00043	.00034	-.00080	14.94904	15.90096	7.33362
4.000	21.073	.00007	.30362	.05896	-.04930	.00031	.00050	-.00064	13.04518	13.99711	7.33362
4.000	26.521	.00084	.89406	.05627	-.06366	.00053	.00054	-.00130	9.23748	13.99711	7.33362
4.000	31.713	.00063	.69336	.05642	-.06401	.00100	.00030	-.00124	9.23748	13.99711	7.33362
4.000	37.108	.00233	1.11540	.05350	-.10847	.00091	.00084	-.00330	11.14133	11.14133	7.33362
GRADIENT		.00010	.03356	-.00026	-.00303	.00002	.00001	-.00010	-.30743	-.25021	.00000



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TABULATED SOURCE DATA LARC UPWT 1031

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NA-7, UPWT 1031, ROCKWELL PRR ORG. CONF. BJT/M40

(RPM060) ( 16 JAN 74 )

## REFERENCE DATA

SRZF = .7845 88.47. 100P = 12.9510 INCHES  
LRZF = 7.8828 INCHES 100P = .0000 INCHES  
BRZF = 19.1132 INCHES 200P = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 37.000  
RVL = 1.000

RUN NO. 49/ 0 RVL = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.345	.00000	.23864	.03979	-.02763	.00004	.00046	-.00115	5.42977	7.33362	2.57399
4.000	16.472	-.00078	.35404	.03920	-.03394	.00024	.00055	.00044	5.42977	7.33362	3.52591
4.000	20.536	-.00016	.49101	.03943	-.04423	.00049	.00036	.00005	4.47784	7.33362	2.57399
4.000	25.709	-.00021	.67336	.03920	-.05675	.00025	.00057	-.00015	4.47784	6.38170	3.52591
4.000	30.786	-.00001	.86575	.03625	-.07653	.00076	.00044	-.00117	4.47784	5.42977	2.57399
4.000	36.043	.00051	1.06949	.03210	-.10474	.00261	.00113	-.00402	2.57399	5.42977	3.52591
GRADIENT		.00003	.03617	-.00030	-.00320	.00002	.00002	-.00012	-.10362	-.09852	.01747

NA-7, UPWT 1031, ROCKWELL PRR ORG. CONF. BJT/M40

(RPM061) ( 16 JAN 74 )

## REFERENCE DATA

SRZF = .7845 88.47. 100P = 12.9510 INCHES  
LRZF = 7.8828 INCHES 100P = .0000 INCHES  
BRZF = 19.1132 INCHES 200P = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 100.000  
RVL = 1.000

RUN NO. 53/ 0 RVL = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.469	-.00180	.25648	.03693	-.02433	-.00031	.00049	.00280	5.42977	7.33362	2.57399
4.000	16.475	-.00153	.37225	.03688	-.03162	-.00027	.00065	.00161	5.42977	7.33362	2.57399
4.000	20.609	-.00189	.50868	.03612	-.04175	-.00030	.00116	.00263	4.47784	5.42977	2.57399
4.000	25.654	-.00208	.66207	.03460	-.05600	-.00077	.00158	.00249	4.47784	5.42977	3.52591
4.000	30.784	-.00171	.86270	.03352	-.07600	-.00026	.00125	.00135	2.57399	5.42977	2.57399
4.000	36.914	-.00167	1.09454	.03958	-.09606	-.00022	.00157	.00006	2.57399	4.47784	2.57399
GRADIENT		.00000	.03593	-.00030	-.00315	.00000	.00004	-.00009	-.11921	-.11934	.01489

REFERENCE DATA  
 9007 = .7245 SQ.FT. 1000P = 12.9510 INCHES  
 1007 = 7.0000 INCHES 1000P = .0000 INCHES  
 9007 = 19.1152 INCHES 200P = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 103.000  
 RN/L = 3.000

PARAMETRIC DATA

RUN NO. 46/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

ALPHA	BETA	CA	CLM	CLM	CYL	CYN	CY	PB1	PB2	PB3
4.000	12.671	.00040	.25048	.03024	.00017	.00035	-.00032	16.85289	16.75675	7.33362
4.000	16.042	-.00046	.36771	-.03784	.00002	.00002	-.00039	14.94904	15.90076	8.28555
4.000	21.082	-.00027	.49994	-.04998	.00001	.00039	-.00025	12.09326	13.99711	8.28555
4.000	26.412	.00002	.68530	.05627	.00003	.00064	-.00085	12.09326	13.99711	7.33362
4.000	31.717	.00062	.88776	-.08060	.00044	.00045	-.00129	11.14133	11.14133	8.28555
4.000	37.043	.00140	1.10783	.05177	.00033	.00101	-.00287	10.18940	11.14133	8.28555
GRADIENT	.00007	.03525	-.00005	-.00005	.00001	.00002	-.00010	-.25523	-.30059	.02142

REFERENCE DATA  
 9007 = .7245 SQ.FT. 1000P = 12.9510 INCHES  
 1007 = 7.0000 INCHES 1000P = .0000 INCHES  
 9007 = 19.1152 INCHES 200P = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 199.000  
 RN/L = 1.000

PARAMETRIC DATA

RUN NO. 50/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

ALPHA	BETA	CA	CLM	CLM	CYL	CYN	CY	PB1	PB2	PB3
4.000	12.396	.00112	.22787	-.01871	-.00099	.00041	.00148	5.42977	7.33362	2.57399
4.000	16.670	-.00086	.34301	-.02594	-.00119	.00099	.00025	5.42977	7.33362	3.32591
4.000	20.542	-.00075	.47453	-.03505	-.00142	.00145	-.00019	4.47784	5.42977	3.32591
4.000	25.755	-.00090	.65954	-.04781	-.00106	.00187	-.00043	4.47784	5.42977	2.57399
4.000	30.732	-.00124	.85461	-.06856	-.00095	.00197	-.00001	2.57399	5.42977	2.57399
4.000	35.746	-.00091	1.05540	-.09034	-.00067	.00127	-.00113	2.57399	5.42977	2.57399
GRADIENT	.00001	.03378	-.00003	-.00006	.00001	.00003	-.00008	-.13965	-.08985	-.02484

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TABULATED SOURCE DATA LARC UPMT 1031

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MA-7,UPMT 1031,ROCKWELL PRR ORB. CONF. BMTN40

(RPM064) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SA,FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 326.000  
RN/L = 1.000

RUN NO. 51/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.384	-.00177	.21631	.04755	-.01067	-.00199	.00049	.00277	5.42977	6.28555	2.57399
4.000	16.512	-.00061	.33772	.04705	-.01399	-.00196	.00157	-.00128	5.42977	7.33362	2.57399
4.000	20.659	-.00095	.47442	.04562	-.02910	-.00213	.00188	-.00031	4.47784	6.38170	2.57399
4.000	25.667	-.00112	.69407	.04580	-.04267	-.00260	.00230	-.00051	3.32591	5.42977	2.57399
4.000	30.775	-.00212	.84844	.04341	-.06148	-.00174	.00091	.00269	2.57399	4.47784	2.57399
4.000	35.947	-.00154	1.06056	.04158	-.08556	-.00142	.00136	.00004	2.57399	4.47784	3.32591
GRADIENT		-.00002	.03592	-.00025	-.00313	.00002	.00001	-.00001	-.14355	-.17086	.02978

MA-7,UPMT 1031,ROCKWELL PRR ORB. CONF. BMTN40

(RPM065) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SA,FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 559.000  
RN/L = 3.000

RUN NO. 47/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.649	-.00136	.24121	.05171	-.02248	-.00081	.00027	.00047	16.85289	18.75675	8.28555
4.000	16.900	-.00263	.35851	.05081	-.02349	-.00131	.00053	.00128	11.90096	18.75675	8.28555
4.000	21.046	-.00169	.48703	.04951	-.03627	-.00189	.00134	-.00052	13.99711	14.94904	9.23748
4.000	26.409	-.00172	.67451	.04935	-.05078	-.00227	.00181	-.00118	10.18940	10.18940	9.23748
4.000	31.714	-.00242	.87675	.04766	-.07128	-.00142	.00119	-.00013	8.28555	10.18940	9.23748
4.000	37.078	-.00248	1.09869	.04540	-.09611	-.00118	.00111	-.00026	9.23748	11.14133	8.28555
GRADIENT		-.00003	.03520	-.00024	-.00299	-.00001	.00004	-.00005	-.37416	-.39295	.01409

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(RPMD66) ( 16 JAN 74 )

MA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BMTN40

REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8928 INCHES YMRP = .0000 INCHES  
 BREF = 13.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 FO-JET = 600.000  
 RN/L = 1.000

PARAMETRIC DATA

RUN NO. 52/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAOH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.405	-.00250	.20535	.03754	.00329	-.00341	.00178	.00258	5.42977	7.33362	2.57399
4.000	16.513	-.00248	.32672	.03582	-.00498	-.00336	.00257	.00135	5.42977	6.38170	2.57399
4.000	20.524	-.00255	.45783	.03540	-.01408	-.00387	.00246	.00226	3.52591	5.42977	2.57399
4.000	25.682	-.00314	.64895	.03508	-.02981	-.00414	.00254	.00345	2.57399	5.42977	2.57399
4.000	30.768	-.00315	.84311	.03455	-.04866	-.00296	.00163	.00391	2.57399	4.47784	2.57399
4.000	35.909	-.00250	1.06125	.03182	-.07193	-.00312	.00210	.00112	2.57399	4.4784	2.57399
GRADIENT		-.00002	.03650	-.00019	-.00318	.00002	-.00001	.00001	-.14114	-.11889	-.00000

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TABULATED SOURCE DATA LARC UPWT 1031

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NA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BMTN41

(RPM067) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 54. FT. YMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 3.000

RUN NO. 63/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
WACH											
2.900	-.067	.00111	-.01352	.08976	-.00969	.00003	.00023	-.00083	103.55715	129.25918	51.20117
2.900	4.293	.00280	.11803	.08380	-.02747	.00015	.00015	-.00152	95.94174	110.22064	54.05695
2.900	8.565	.00313	.24480	.08095	-.04323	.00037	.00027	-.00171	80.71091	94.98981	49.29732
2.900	12.716	.00393	.36975	.07754	-.05750	.00036	.00026	-.00190	56.91273	81.66283	41.68190
2.900	17.013	.00317	.50734	.07438	-.07232	.00053	.00037	-.00172	41.68190	67.38393	35.97034
2.900	21.258	.00361	.65409	.07102	-.08637	.00050	.00061	-.00237	30.25877	54.05695	35.01841
GRADIENT		.00339	.03003	-.00068	-.00406	.00003	-.00002	-.00016	-1.73868	-4.34670	.65200

RUN NO. 65/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
WACH											
2.950	-.213	-.00106	-.01988	.07979	-.01292	.00024	.00025	.00023	71.19164	84.51861	27.40299
2.950	4.097	.00008	.09132	.07695	-.02511	.00026	.00033	-.00064	70.23971	71.19164	28.35492
2.950	8.228	.00111	.20455	.07459	-.03551	.00039	.00043	-.00103	52.15310	58.81658	25.49914
2.950	12.572	.00190	.32622	.07162	-.04705	.00058	.00028	-.00106	36.92226	49.29732	21.69143
2.950	16.762	.00217	.45660	.06929	-.06037	.00059	.00042	-.00141	27.40299	41.68190	18.83565
2.950	21.018	.00303	.59787	.06632	-.07389	.00074	.00058	-.00264	19.78758	33.11456	17.88372
GRADIENT		.00333	.02580	-.00066	-.00283	.00000	.00002	-.00020	-.22087	-3.09210	.22087

(RPM068) ( 16 JAN 74 )

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN41

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 151.000  
 RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 66/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.950	-.208	-.00036	-.02136	.07923	-.01261	.00025	.00023	-.00011	70.23971	84.51861	27.40299
2.950	4.032	.00030	.08987	.07692	-.02532	.00026	.00028	-.00063	70.23971	71.19164	27.40299
2.950	8.219	.00127	.20460	.07461	-.03532	.00033	.00038	-.00105	51.20117	58.81658	22.64336
2.950	12.471	.00303	.32349	.07142	-.04652	.00054	.00035	-.00176	35.01841	48.34539	21.69143
2.950	16.752	.00215	.45630	.06984	-.06031	.00059	.00032	-.00141	24.54721	33.77804	17.88372
2.950	21.073	.00342	.59969	.06598	-.07372	.00073	.00050	-.00230	17.88372	31.21070	19.78758
GRADIENT		.00020	.02611	-.00054	-.00298	.00000	.00001	-.00012	-.00000	-3.12840	-.00000

(RPM069) ( 16 JAN 74 )

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN41

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 185.000  
 RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 64/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.183	.00100	-.01480	.08636	-.00944	-.00008	.00028	-.00084	102.60523	129.25918	52.15310
2.900	4.097	.00272	.11394	.08392	-.02672	.00020	.00014	-.00148	95.94174	111.17257	53.10502
2.900	8.356	.00592	.23915	.08121	-.04266	.00032	.00020	-.00201	81.66283	94.98981	46.44153
2.900	12.656	.00447	.36812	.07753	-.05720	.00044	.00028	-.00219	56.91273	81.66283	41.68190
2.900	17.082	.00324	.51132	.07400	-.07260	.00048	.00038	-.00177	42.63383	66.43200	36.92226
2.900	21.390	.00325	.65798	.07070	-.08667	.00044	.00054	-.00210	30.25877	53.10502	36.92226
GRADIENT		.00040	.03008	-.00057	-.00404	.00007	-.00003	-.00015	-1.55689	-4.22584	.22241

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BATM41

(RPM070) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 1.000

RUN NO. 57/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.432	-.00173	.25046	.06319	-.02924	.00011	.00008	.00480	8.36445	8.36445	2.65289
4.000	16.511	-.00132	.37358	.06236	-.03783	.00038	.00021	.00398	7.41253	7.41253	2.65289
4.000	20.595	-.00143	.51286	.06260	-.04848	.00063	.00022	.00399	6.48060	7.41253	2.65289
4.000	25.682	-.00152	.68731	.05986	-.06069	.00064	.00044	.00323	5.50867	7.41253	2.65289
4.000	30.706	-.00129	.88704	.05796	-.08185	.00112	.00022	.00317	5.50867	6.48060	2.65289
4.000	35.922	-.00066	1.09723	.05422	-.10318	.00093	.00058	.00150	4.55675	5.50867	2.65289
GRADIENT		.00003	.03612	-.00037	-.00313	.00004	.00002	-.00012	-.15403	-.10442	.00000

MA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BATM41

(RPM071) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 3.000

RUN NO. 54/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.689	-.00197	.25837	.06069	-.03308	.00045	.00040	.00130	17.88372	19.78758	7.41253
4.000	16.916	-.00150	.38009	.05963	-.04087	.00063	.00051	.00081	15.97987	15.97987	7.41253
4.000	21.094	-.00190	.51144	.05904	-.04882	.00062	.00048	.00097	14.07602	15.02794	7.41253
4.000	26.440	-.00131	.70111	.05847	-.06358	.00072	.00059	.00035	10.26831	14.07602	7.41253
4.000	31.727	-.00070	.90513	.05645	-.08359	.00120	.00036	.00027	11.22024	14.07602	7.41253
4.000	37.042	.00020	1.12488	.05335	-.10842	.00116	.00081	-.00092	12.17216	11.22024	7.41253
GRADIENT		.00008	.03566	-.00028	-.00306	.00003	.00001	-.00008	-.26519	-.28436	.00000

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTM41

(RPM072) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1132 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 37.000  
RN/L = 1.000

RUN NO. 58/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.399	-.00177	.24455	.06171	-.02994	.00035	.00007	.00490	7.41253	7.41253	1.70096
4.000	16.499	-.00134	.36761	.06130	-.03666	.00038	.00020	.00393	7.41253	7.41253	2.65289
4.000	20.582	-.00145	.50719	.06157	-.04733	.00062	.00021	.00364	4.55675	7.41253	2.65289
4.000	25.790	-.00150	.69332	.06000	-.06183	.00064	.00045	.00318	5.50867	7.41253	2.65289
4.000	30.832	-.00067	.89232	.05771	-.08103	.00092	.00037	.00167	5.50867	6.46060	2.65289
4.000	35.887	-.00091	1.09738	.05363	-.10508	.00069	.00101	.00147	4.55675	6.46060	1.70096
GRADIENT		.00004	.03547	-.00032	-.00318	.00002	.00003	-.00015	-.11144	-.04754	-.00237

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTM41

(RPM073) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1132 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 100.000  
RN/L = 1.000

RUN NO. 59/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.409	-.00177	.24452	.06163	-.02993	.00035	.00007	.00491	7.41253	7.41253	1.70096
4.000	16.499	-.00134	.36748	.06127	-.03665	.00038	.00020	.00393	6.46060	7.41253	1.70096
4.000	20.582	-.00157	.50662	.06094	-.04729	.00039	.00043	.00360	5.50867	7.41253	1.70096
4.000	25.675	-.00043	.68746	.05975	-.06073	.00005	.00193	-.00108	5.50867	7.41253	2.65289
4.000	30.761	-.00061	.88673	.05752	-.08186	.00025	.00136	.00021	5.50867	6.46060	1.70096
4.000	35.911	-.00028	1.09750	.05424	-.10524	.00020	.00214	-.00139	5.50867	6.46060	1.70096
GRADIENT		.00007	.03639	-.00030	-.00314	-.00001	.00009	-.00029	-.07190	-.04711	.00494



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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BJT/M41 (RPM074) ( 16 JAN 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XARP = 12.9510 INCHES  
LREF = 7.8628 INCHES YARP = .0000 INCHES  
BREF = 15.1152 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 103.000  
RN/L = 3.000

RUN NO. 55/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.682	-.00182	.26034	.06071	-.03345	.00045	.00033	.00128	17.88372	19.78758	7.41253
4.000	16.898	-.00192	.36014	.05951	-.04067	.00053	.00040	.00126	16.93180	16.93180	7.41253
4.000	21.077	-.00131	.51341	.05690	-.04918	.00064	.00053	.00049	14.07602	15.02794	7.41253
4.000	26.394	-.00131	.69923	.05639	-.06322	.00064	.00059	.00035	10.26831	15.02794	6.46060
4.000	31.702	-.00070	.90516	.05631	-.08358	.00120	.00036	.00027	11.22024	13.12409	7.41253
4.000	37.039	.00097	1.12297	.05334	-.10806	.00095	.00112	-.00188	12.17216	11.22024	7.41253
GRADIENT		.00010	.03553	-.00028	-.00303	.00003	.00002	-.00011	-.28160	-.31295	-.00473

## REFERENCE DATA

SREF = .7245 SQ.FT. XARP = 12.9510 INCHES  
LREF = 7.8628 INCHES YARP = .0000 INCHES  
BREF = 15.1152 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 199.000  
RN/L = 1.000

RUN NO. 50/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.408	-.00114	.24451	.06101	-.02991	-.00004	.00120	.00204	7.41253	7.41253	1.70096
4.000	16.499	-.00107	.36773	.06208	-.03665	-.00048	.00198	.00099	6.46060	7.41253	1.70096
4.000	20.562	-.00098	.50718	.06045	-.04735	-.00067	.00277	-.00077	4.55675	7.41253	1.70096
4.000	25.864	-.00069	.68767	.05958	-.06083	-.00132	.00358	-.00272	5.50867	7.41253	1.70096
4.000	30.772	-.00066	.86660	.05738	-.08189	-.00041	.00257	-.00129	5.50867	6.46060	1.70096
4.000	35.987	.00006	1.09728	.05375	-.10511	-.00013	.00271	-.00287	5.50867	5.50867	1.70096
GRADIENT		.00005	.03639	-.00028	-.00320	-.00000	.00106	-.00020	-.06445	-.07690	.00000

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTM41

(RPM076) ( 16 JAN 74 )

## REFERENCE DATA

REF = .7245 59.17. XGRP = 12.9310 INCHES  
LREF = 7.8628 INCHES YGRP = .0000 INCHES  
BREF = 15.1152 INCHES ZGRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 328.000  
RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 61/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	FB1	FB2	FB3
4.000	12.416	-.00066	.24475	.06026	-.02596	-.00133	.00376	-.00238	7.41253	6.46060	2.65289
4.000	16.519	-.00029	.36783	.05978	-.03673	-.00197	.00510	-.00486	7.41253	7.41253	2.65289
4.000	20.562	-.00049	.50732	.06034	-.04746	-.00220	.00534	-.00523	5.50867	7.41253	2.65289
4.000	25.652	.00114	.66758	.05977	-.06286	-.00214	.00549	-.00705	4.55675	7.41253	1.70096
4.000	30.760	-.00002	.88113	.05748	-.07896	-.00194	.00371	-.00416	4.55675	6.46060	1.70096
4.000	35.934	-.00022	1.09700	.05346	-.10318	-.00013	.00313	-.00284	4.55675	5.50867	1.70096
GRADIENT		.00002	.03626	-.00026	-.00308	.00006	-.00005	-.00000	-.14112	-.04974	-.05202

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTM41

(RPM077) ( 16 JAN 74 )

## REFERENCE DATA

REF = .7245 59.17. XGRP = 12.9310 INCHES  
LREF = 7.8628 INCHES YGRP = .0000 INCHES  
BREF = 15.1152 INCHES ZGRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 559.000  
RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 56/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	FB1	FB2	FB3
4.000	12.660	-.00132	.23798	.05966	-.03299	.00038	.00031	.00081	17.88372	19.78758	6.46060
4.000	16.893	-.00041	.37825	.05868	-.04113	-.00002	.00175	-.00161	16.93180	15.97967	6.46060
4.000	21.083	.00102	.51169	.05802	-.04949	-.00063	.00292	-.00437	14.07602	14.07602	6.46060
4.000	26.364	.00173	.69959	.05791	-.06331	-.00099	.00370	-.00596	11.22024	15.02794	6.46060
4.000	31.713	.00124	.91207	.05591	-.06318	-.00032	.00297	-.00459	12.17216	13.12409	6.46060
4.000	37.032	.00304	1.12142	.05336	-.10735	-.00012	.00292	-.00575	12.17216	11.22024	6.46060
GRADIENT		.00016	.03552	-.00024	-.00301	-.00002	.00009	-.00024	-.25996	-.26891	.07000

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTN41

(RPM078) ( 16 JAN 74 )

## REFERENCE DATA

SREF = 7245 SQ.FT. XRRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YRRP = .0000 INCHES  
BREF = 15.1152 INCHES ZRRP = 6.0000 INCHES  
SCALE = .0190

## PARAMETRIC DATA

BETA = .000 PO-JET = 600.000  
RN/L = 1.000

RUN NO. 62/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.527	.00135	.25120	.05926	-.02930	-.00431	.00938	-.01414	6.48060	7.41253	2.65289
4.000	16.526	.00109	.36257	.03955	-.03562	-.00456	.00958	-.01368	6.46060	7.41253	2.65289
4.000	20.561	.00115	.50215	.06072	-.04462	-.00388	.00818	-.01292	5.50867	6.46060	2.65289
4.000	25.674	.00257	.68814	.05955	-.05907	-.00324	.00707	-.01005	4.55675	6.46060	2.65289
4.000	30.876	.00351	.89256	.05723	-.07924	-.00143	.00936	-.00710	5.50867	5.50867	2.65289
4.000	35.922	-.00022	1.05693	.05297	-.10314	-.00013	.00313	-.00284	4.55675	5.50867	2.65289
GRADIENT		-.00006	.03647	-.00025	-.00314	.00019	-.00028	.00048	-.07926	-.09194	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTN1

(AFR0021) ( 06 FEB 74 )

## REFERENCE DATA

SREF = 7245 SQ.FT. XRRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YRRP = .0000 INCHES  
BREF = 15.1152 INCHES ZRRP = 6.0000 INCHES  
SCALE = .0190

## PARAMETRIC DATA

BETA = .000 PO-JET = 37.000  
RN/L = 1.000

RUN NO. 81/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.298	-.00071	.06176	.03694	.02160	-.00025	.00051	.00087	12.05675	5.39326	3.48940
4.000	16.337	-.00106	.11023	.03799	.03707	-.00027	.00039	.00168	13.00867	5.39326	4.44133
4.000	20.403	-.00102	.15628	.03670	.05456	-.00026	.00061	.00151	13.00867	6.34518	3.48940
4.000	25.514	-.00140	.22671	.03579	.07518	-.00031	.00073	.00204	10.15289	7.29711	3.48940
4.000	30.562	-.00096	.31130	.03600	.09680	.00001	.00059	.00095	8.24904	17.15289	3.48940
4.000	35.599	-.00121	.36824	.03515	.11579	.00001	.00053	.00122	7.29711	14.91253	3.48940
GRADIENT		-.00001	.01409	-.00015	.00408	.00001	.00000	-.00000	-.25463	.38900	-.01751

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TABULATED SOURCE DATA LARC UPMT 1031

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NA-7,UPMT 1031,ROCKWELL PRR ORB. CONF. BTN1

(APM002) ( 06 FEB 74 )

## REFERENCE DATA

SRCP = .7245 50.FT. WARP = 12.9510 INCHES  
 LREF = 7.8828 INCHES WARP = .0000 INCHES  
 BRCP = .1132 INCHES ZARP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 320.000  
 RN/L = 1.000

RUN NO. 79/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.785	-.00057	.06194	.03674	.02354	-.00025	.00030	.00066	22.52794	6.34518	4.44133
4.000	15.484	-.00112	.19025	.03742	.03581	-.00028	.00038	.00197	18.72024	5.39326	4.44133
4.000	20.436	-.00100	.16219	.03655	.03549	-.00026	.00031	.00147	15.86445	9.39326	4.44133
4.000	25.494	-.00154	.22874	.03591	.07704	-.00050	.00094	.00206	12.05675	7.29711	4.44133
4.000	30.505	-.00098	.31150	.03637	.09666	.00025	.00056	.00101	9.20096	10.15289	4.44133
4.000	35.614	-.00119	.39429	.03627	.11656	.00001	.00053	.00117	5.39326	16.01638	3.48940
GRADIENT		-.00002	.01424	-.00009	.00404	.00002	.00001	-.00001	-.70566	.42398	-.02947

NA-7,UPMT 1031,ROCKWELL PRR ORB. CONF. BTN1

(APM003) ( 06 FEB 74 )

## REFERENCE DATA

SRCP = .7245 50.FT. WARP = 12.9510 INCHES  
 LREF = 7.8828 INCHES WARP = .0000 INCHES  
 BRCP = 15.1132 INCHES ZARP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 600.000  
 RN/L = 1.000

RUN NO. 80/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.451	-.00114	.06174	.03620	.02347	-.00029	.00016	.00226	26.33565	6.34518	3.48940
4.000	16.457	-.00102	.11008	.03545	.03900	-.00027	.00036	.00188	23.47987	6.34518	3.48940
4.000	20.413	-.00098	.15624	.03608	.05458	-.00026	.00040	.00150	21.57602	6.34518	3.48940
4.000	25.515	-.00140	.22681	.03526	.07711	-.00051	.00073	.00204	14.91253	7.29711	3.48940
4.000	30.549	-.00141	.31148	.03504	.09692	.00021	.00023	.00240	10.15289	10.15289	3.48940
4.000	35.637	-.00121	.39406	.03560	.11658	.00025	.00052	.00122	9.20096	13.96060	3.48940
GRADIENT		-.00001	.01436	-.00011	.00405	.00002	.00001	-.00002	-.81109	.31690	.00000

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TABULATED SOURCE DATA LARC UPWT 1031

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NA-7,UPWT 1031,ROCKWELL PRR ORG. CONF. BTM40

(APR004) ( 06 FEB 74 )

## REFERENCE DATA

9027 = .7245 30.47. 100P = 12.9510 INCHES  
LW27 = 7.8628 INCHES 100P = .0000 INCHES  
9027 = 15.1132 INCHES 200P = 6.0000 INCHES  
SCALE = .0190

## PARAMETRIC DATA

BETA = .000 PO-JET = .0020  
RN/L = 1.000

RUN NO. 73/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NA01	ALPHA	BETA	ON	CA	CLM	CSL	CYN	CY	PB1	PB2	PB3
4.000	12.390	-.00089	.07352	.03969	.02127	-.00001	.00091	.00083	7.15675	12.86831	3.34904
4.000	16.399	-.00108	.11602	.03793	.03599	-.00003	.00036	.00169	6.20482	12.86831	4.30096
4.000	20.419	-.00100	.16816	.03784	.05426	-.00002	.00061	.00147	6.20482	14.77216	3.34904
4.000	25.464	-.00132	.23491	.03681	.07412	-.00090	.00095	.00202	5.25289	14.77216	3.34904
4.000	30.562	-.00153	.31755	.03670	.09580	.00021	.00045	.00237	5.25289	15.72409	3.34904
4.000	35.617	-.00117	.40062	.03629	.11558	.00001	.00053	.00113	6.20482	15.72409	3.34904
GRADIENT		-.00003	.01415	-.00013	.00410	.00000	.00000	.00002	-.04998	.13773	-.01756

NA-7,UPWT 1031,ROCKWELL PRR ORG. CONF. BTM40

(APR005) ( 06 FEB 74 )

## REFERENCE DATA

9027 = .7245 30.47. 100P = 12.9510 INCHES  
LW27 = 7.8628 INCHES 100P = .0000 INCHES  
9027 = 15.1132 INCHES 200P = 6.0000 INCHES  
SCALE = .0190

## PARAMETRIC DATA

BETA = .000 PO-JET = 37.000  
RN/L = 1.000

RUN NO. 74/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NA01	ALPHA	BETA	ON	CA	CLM	CSL	CYN	CY	PB1	PB2	PB3
4.000	12.390	-.00095	.06783	.03823	.02433	-.00025	.00030	.00081	6.20482	12.86831	3.34904
4.000	16.378	-.00108	.11037	.03578	.04097	-.00027	.00038	.00188	6.20482	12.86831	3.34904
4.000	20.427	-.00096	.16229	.03551	.05544	-.00026	.00040	.00145	5.25289	14.77216	3.34904
4.000	25.468	-.00150	.23508	.03439	.07799	-.00074	.00095	.00196	5.25289	14.77216	3.34904
4.000	30.571	-.00137	.31171	.03378	.09698	-.00027	.00024	.00229	5.25289	15.72409	3.34904
4.000	35.627	-.00116	.39471	.03457	.11860	-.00023	.00054	.00112	6.20482	15.72409	3.34904
GRADIENT		-.00003	.01414	-.00015	.00404	-.00000	.00001	.00002	-.01495	.13733	.00000

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TABULATED SOURCE DATA LARC UPWT 1031

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NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BTMAD

(APM006) ( 06 FEB 74 )

## REFERENCE DATA

SPED = .7245 50.FT. XMRP = 12.9510 INCHES  
LREF = 7.8028 INCHES YMRP = .0000 INCHES  
SPED = 15.1132 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 100.000  
RNL = 1.000

RUN NO. 75/ 0 RNL = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLM	CL	CYN	CY	PB1	PB2	PB3
4.000	12.358	-.00109	.06215	.03479	.02745	-.00077	.00017	.00215	7.15675	12.66031	3.34904
4.000	16.429	-.00160	.11056	.03328	.04295	-.00079	.00025	.00317	7.15675	13.82023	3.34904
4.000	20.481	-.00196	.16244	.03243	.05929	-.00082	.00013	.00415	6.20482	14.77216	3.34904
4.000	25.507	-.00193	.22928	.03197	.08107	-.00102	.00060	.00334	6.20482	14.77216	3.34904
4.000	30.574	-.00192	.31197	.03161	.10273	-.00055	.00011	.00364	7.15675	14.77216	3.34904
4.000	35.619	-.00155	.39501	.03166	.12434	-.00075	.00019	.00240	7.15675	17.62794	3.34904
GRADIENT		-.00002	.01431	-.00012	.00419	.00000	.00000	.00001	.00248	.16281	.00000

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BTMAD

(APM007) ( 06 FEB 74 )

## REFERENCE DATA

SPED = .7245 50.FT. XMRP = 12.9510 INCHES  
LREF = 7.8028 INCHES YMRP = .0000 INCHES  
SPED = 15.1132 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 199.000  
RNL = 1.000

RUN NO. 76/ 0 RNL = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLM	CL	CYN	CY	PB1	PB2	PB3
4.000	12.337	-.00166	.15644	.03083	.03063	-.00105	.00003	.00355	7.15675	13.82023	3.34904
4.000	16.408	-.00160	.10478	.02996	.04607	-.00103	.00025	.00316	7.15675	13.82023	3.34904
4.000	20.408	-.00193	.15690	.02884	.06244	-.00129	.00014	.00408	7.15675	13.82023	3.34904
4.000	25.519	-.00220	.22934	.02795	.08310	-.00131	.00005	.00466	5.25289	13.82023	3.34904
4.000	30.573	-.00209	.30628	.02770	.10595	-.00080	-.00067	.00505	6.20482	14.77216	3.34904
4.000	35.654	-.00196	.39503	.02630	.12636	-.00103	-.00015	.00373	6.20482	16.67602	3.34904
GRADIENT		-.00002	.01446	-.00012	.00414	.00001	-.00002	.00004	-.00750	.10745	.00000



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TABULATED SOURCE DATA LABR UPWT 1031

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NA-7, UPWT 1031, ROCKWELL PER ORG. CONF. 87940

(APR008) (08 FEB 74)

## REFERENCE DATA

WGT = .7245 LB/FT. WWP = 12.9510 INCHES  
LWT = 7.6626 INCHES WWP = .0000 INCHES  
RWT = 15.1132 INCHES ZWP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 328.000  
RM/L = 1.000

RUN NO. 77/ 0 RM/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WGT	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.340	-.00219	.09873	.02882	.03644	-.00137	-.00010	.00483	8.10867	13.82023	3.34904
4.000	16.400	-.00002	.10516	.02494	.04003	-.00163	.00020	.00382	8.10867	13.82023	3.34904
4.000	20.439	-.00366	.13710	.02359	.06456	-.00109	.00015	.00822	7.15675	13.82023	3.34904
4.000	25.310	-.00364	.22953	.02351	.03709	-.00143	-.00060	.00665	6.20482	13.82023	3.34904
4.000	30.542	-.00365	.30853	.02334	.10991	-.00056	-.00130	.00920	5.25289	14.77216	3.34904
4.000	35.642	-.00338	.36933	.02272	.13141	-.00164	-.00099	.00785	7.15675	15.72409	3.34904
GRADIENT		-.00005	.01421	-.02015	.00414	.00002	-.00006	.00015	-.06495	.07760	.00000

NA-7, UPWT 1031, ROCKWELL PER ORG. CONF. 87940

(APR008) (08 FEB 74)

## REFERENCE DATA

WGT = .7245 LB/FT. WWP = 12.9510 INCHES  
LWT = 7.6626 INCHES WWP = .0000 INCHES  
RWT = 15.1132 INCHES ZWP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 600.00  
RM/L = 1.000

RUN NO. 78/ 0 RM/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WGT	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.343	-.00339	.05152	.01631	.04554	-.00280	-.00016	.00748	8.10867	11.91638	3.34904
4.000	16.413	-.00462	.09985	.01420	.06108	-.00266	.00020	.00992	8.10867	11.91638	3.34904
4.000	20.439	-.00466	.14597	.01292	.07673	-.00245	-.00034	.01099	6.20482	13.82023	3.34904
4.000	25.331	-.00507	.21823	.01217	.09740	-.00234	-.00164	.01302	6.20482	13.82023	3.34904
4.000	30.567	-.00474	.30110	.01314	.12068	-.00176	-.00157	.01188	5.25289	15.72409	3.34904
4.000	35.644	-.00445	.38415	.01317	.14052	-.00267	-.00125	.01049	7.15675	16.67602	3.34904
GRADIENT		-.00003	.01431	-.02011	.00412	.00002	-.00007	.00013	-.07744	.21493	.00000

NA-7, UPUT 1031, ROCKWELL PPR ORB. CONF. BU441

(APR010) 08 FEB 74 )

## REFERENCE DATA

9407 = .7245 94.47. 19407 = 12.9510 INCHES  
 19407 = 7.8828 INCHES 19407 = .0000 INCHES  
 9407 = 15.1152 INCHES 29407 = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
 RN/L = 1.000

RUN NO. 877 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACN	ALPHA	BETA	ON	CA	CL	CL	CYN	CY	PB1	PB2	PB3
4.000	12.447	-.00099	.29077	.05778	-.03486	.00022	.00031	.00092	7.21638	6.16831	5.31253
4.000	16.929	-.00002	.37238	.05828	-.04021	.00050	.00063	-.00033	6.26445	7.21638	5.31253
4.000	20.540	-.00042	.50418	.05819	-.04783	.00051	.00078	-.00058	4.36060	7.21638	4.36060
4.000	25.882	-.00036	.68434	.05737	-.05995	.00078	.00086	-.00095	4.36060	7.21638	4.36060
4.000	30.789	-.00040	.87898	.05689	-.08075	.00077	.00107	-.00105	4.36060	6.26445	4.36060
4.000	35.881	.00043	1.08536	.05369	-.11191	.00129	.00098	-.00256	4.36060	5.31253	4.36060
GRADIENT		.00003	.05568	-.00016	-.00288	.00004	.00003	-.00012	-.11671	-.11438	-.04469

## REFERENCE DATA

9407 = .7245 94.47. 19407 = 12.9510 INCHES  
 19407 = 7.8828 INCHES 19407 = .0000 INCHES  
 9407 = 15.1152 INCHES 29407 = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 37.000  
 RN/L = 1.000

NA-7, UPUT 1031, ROCKWELL PPR ORB. CONF. BU441

(APR011) 08 FEB 74 )

RUN NO. 887 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACN	ALPHA	BETA	ON	CA	CL	CL	CYN	CY	PB1	PB2	PB3
4.000	12.400	-.00081	.29037	.05747	-.03458	.00046	.00031	.00097	5.31253	6.26445	4.36060
4.000	16.908	-.00079	.36642	.05784	-.03909	.00046	.00054	.00113	5.31253	6.26445	4.36060
4.000	20.547	-.00044	.49814	.05783	-.04650	.00051	.00078	-.00053	5.31253	6.26445	4.36060
4.000	25.704	-.00036	.68339	.05771	-.05992	.00052	.00087	-.00100	4.36060	6.26445	4.36060
4.000	30.809	-.00028	.87200	.05814	-.07985	.00076	.00085	-.00101	5.31253	6.26445	4.36060
4.000	35.880	.00040	1.09409	.05415	-.10374	.00105	.00099	-.00280	4.36060	5.31253	5.31253
GRADIENT		.00004	.05558	-.00014	-.00284	.00002	.00003	-.00015	-.03471	-.02970	.02970



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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BAN41

(APM012) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 100.000  
RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 69/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.401	-.00061	.29046	.05752	-.03269	.00046	.00030	.00097	5.31253	6.26445	4.36060
4.000	16.506	-.00077	.36619	.05838	-.03910	.00046	.00033	.00111	5.31253	6.26445	5.31253
4.000	20.569	-.00029	.50363	.05820	-.04758	.00051	.00057	-.00059	5.31253	6.26445	5.31253
4.000	25.692	-.00095	.66324	.05784	-.05989	.00072	.00072	.00046	4.36060	6.26445	5.31253
4.000	30.778	-.00026	.87760	.05688	-.08075	.00076	.00085	-.00106	5.31253	5.31253	5.31253
4.000	35.906	-.00011	1.08975	.05400	-.10292	.00101	.00085	-.00125	4.36060	5.31253	5.31253
GRADIENT		.00002	.03583	-.00014	-.00298	.00002	.00003	-.00010	-.03472	-.04709	.02728

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 199.000  
RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 70/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.410	-.00061	.29023	.05740	-.03266	.00046	.00030	.00097	6.26445	6.26445	3.40867
4.000	16.549	-.00075	.37168	.05804	-.04013	.00046	.00033	.00106	5.31253	6.26445	4.36060
4.000	20.569	-.00042	.50321	.05872	-.04757	.00051	.00078	-.00057	4.36060	6.26445	4.36060
4.000	25.690	-.00040	.67700	.05665	-.05870	.00076	.00086	-.00090	4.36060	6.26445	4.36060
4.000	30.768	-.00026	.87767	.05641	-.07283	.00076	.00085	-.00106	5.31253	5.31253	4.36060
4.000	35.891	-.00015	1.06344	.05348	-.10363	.00124	.00084	-.00114	4.36060	5.31253	3.40867
GRADIENT		.00002	.03556	-.00017	-.00295	.00003	.00003	-.00010	-.05466	-.04716	-.00246

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NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUN41

(APM014) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 328.000  
 RN/L = 1.000

RUN NO. 71/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.391	-.00061	.25035	.05812	-.03271	.00046	.00030	.00097	6.26445	6.26445	4.36060
4.000	16.500	-.00089	.37195	.05843	-.03829	.00046	.00034	.00108	5.31253	6.26445	4.36060
4.000	20.594	-.00100	.50894	.05801	-.04670	.00071	.00064	.00083	4.36060	6.26445	3.40867
4.000	25.682	-.00095	.68261	.05665	-.05978	.00072	.00072	.00046	4.36060	6.26445	3.40867
4.000	30.768	-.00086	.87700	.05637	-.07877	.00076	.00085	-.00106	4.36060	5.31253	3.40867
4.000	35.929	-.00071	1.08920	.05382	-.10286	.00101	.00085	-.00124	4.36060	5.31253	4.36060
GRADIENT		.00003	.03562	-.00018	-.00296	.00002	.00002	-.00011	-.07186	-.04704	-.01481

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUN41

(APM015) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 600.000  
 RN/L = 1.000

RUN NO. 72/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.460	-.00117	.25596	.05758	-.03375	.00042	.00017	.00233	6.26445	6.26445	4.36060
4.000	16.530	-.00089	.37174	.05820	-.03825	.00046	.00034	.00107	5.31253	6.26445	3.40867
4.000	20.573	-.00100	.50900	.05815	-.04672	.00071	.00064	.00084	4.36060	6.26445	3.40867
4.000	25.684	-.00095	.68863	.05721	-.06092	.00072	.00072	.00041	4.36060	6.26445	3.40867
4.000	30.804	-.00095	.88271	.05612	-.07986	.00072	.00093	.00031	4.36060	5.31253	4.36060
4.000	35.894	-.00082	1.08868	.05344	-.10280	.00097	.00092	.00017	3.40867	5.31253	4.36060
GRADIENT		.00001	.03569	-.00017	-.00296	.00002	.00003	-.00008	-.10177	-.04724	.01995

DATE 06 FEB 74

TABULATED SOURCE DATA LARC UPWT 1031

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MA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BWTN1

(APMD16) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 3.000

RUN NO. 19/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.155	-.00034	-.01637	.08728	-.00920	-.00008	.00029	-.00044	108.93403	124.16486	48.96263
2.900	4.111	.00132	.11153	.08401	-.02545	.00007	.00018	-.00092	104.17439	108.93403	53.72226
2.900	8.362	.00307	.23684	.08105	-.04194	.00027	.00027	-.00189	89.89549	93.70320	47.05877
2.900	12.682	.00261	.36629	.07750	-.05682	.00037	.00025	-.00178	61.33768	80.37622	40.39529
2.900	16.967	.00231	.50349	.07430	-.07174	.00043	.00044	-.00192	47.05877	66.09732	34.68372
2.900	21.300	.00172	.64945	.07078	-.08569	.00048	.00055	-.00177	31.82794	52.77034	34.68372
GRADIENT		.00039	.02999	-.00077	-.00381	.00004	-.00003	-.00011	-1.11572	-3.57028	1.11571

RUN NO. 19/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.950	-.221	-.00056	-.02462	.07996	-.01159	.00027	.00031	-.00037	74.66466	80.37622	25.16445
2.950	4.014	.00087	.08571	.07675	-.02407	.00032	.00037	-.00102	74.66466	69.90502	28.02024
2.950	8.369	.00176	.20655	.07423	-.03507	.00029	.00047	-.00166	56.57805	57.52997	24.21253
2.950	12.547	.00220	.32286	.07124	-.04634	.00048	.00044	-.00200	38.49143	48.01070	20.40482
2.950	16.765	.00215	.45260	.06894	-.06001	.00054	.00043	-.00199	27.56831	39.44336	17.54904
2.950	21.013	.00228	.59393	.06602	-.07237	.00054	.00042	-.00202	21.35675	30.87602	16.59711
GRADIENT		.00034	.02605	-.00076	-.00295	.00001	.00001	-.00015	-.00000	-2.47254	.67433

MA-7, UPMT 1031, ROCKWELL PRR ORB. CONF. BMTN1 (APMD17) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 19.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0193

## PARAMETRIC DATA

BETA = -5.000 PO-JET = .000  
 RN/L = 3.000

RUN NO. 16/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CSL	CYN	CY	FB1	FB2	FB3
2.900	-1.178	-5.17613	-.01498	.08868	-.01033	-.00223	-.00071	.07813	148.91496	147.96304	46.10685
2.900	4.046	-5.16699	.10991	.08560	-.02724	-.00112	.00057	.07226	128.92450	130.82835	46.10685
2.900	8.408	-5.15995	.23870	.08140	-.04338	.00076	.00180	.06730	109.88596	114.64559	43.25107
2.900	12.710	-5.15773	.36759	.07765	-.05847	.00262	.00310	.06439	94.65512	100.36669	37.33951
2.900	17.149	-5.15733	.50895	.07391	-.07282	.00411	.00515	.06136	80.37622	85.13586	34.03372
2.900	21.293	-5.15969	.65093	.07023	-.08594	.00535	.00704	.05959	73.71273	71.80888	31.82794
GRADIENT	.00216	.02937	-.00073	-.00026	-.00400	.00026	.00030	-.00139	-4.73259	-4.05651	.00000

MA-7, UPMT 1031, ROCKWELL PRR ORB. CONF. BMTN1

(APMD18) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 19.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0193

## PARAMETRIC DATA

BETA = .000 PO-JET = 187.000  
 RN/L = 3.000

RUN NO. 16/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CSL	CYN	CY	FB1	FB2	FB3
2.900	-1.190	-5.00045	-.01903	.08766	-.00863	-.00008	.00033	-.00045	184.13626	51.81841	48.01070
2.900	4.107	.00145	.11419	.08431	-.02638	.00017	.00014	-.00082	172.71314	50.86648	51.81841
2.900	8.403	.00196	.23930	.08124	-.04246	.00023	.00021	-.00129	153.67460	48.01070	46.10685
2.900	12.665	.00265	.36756	.07763	-.05750	.00032	.00025	-.00180	117.02064	42.29914	39.44336
2.900	17.096	.00237	.50776	.07428	-.07209	.00043	.00044	-.00195	99.41476	33.73180	34.68372
2.900	21.303	.00203	.65126	.07071	-.08599	.00049	.00068	-.00208	79.42429	35.63565	33.73180
GRADIENT	.00044	.03037	-.00078	-.00006	-.00413	.00006	-.00004	-.00011	-2.65839	-2.22153	.88613

DATE 06 FEB 74

TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BNTN1

(APM019) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9310 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = -5.000 PO-JET = 187.000  
RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 17/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.214	-5.17555	-.01631	.08874	-.01094	-.00228	-.00068	.07783	215.54985	59.43383	46.10685
2.900	4.136	-5.16595	.11380	.08569	-.02796	-.00104	.00068	.07163	180.32856	50.86648	45.15492
2.900	6.361	-5.15979	.23671	.06170	-.04340	.00070	.00175	.06728	132.72267	43.25107	41.34721
2.900	12.719	-5.15757	.36768	.07765	-.05849	.00256	.00305	.06439	135.58799	36.58758	36.58758
2.900	16.975	-5.15725	.50266	.07420	-.07208	.00400	.00510	.06140	121.30908	33.73180	33.73180
2.900	21.288	-5.15921	.64859	.07028	-.08548	.00552	.00707	.05976	109.88596	37.53951	30.87602
GRADIENT		.00221	.02991	-.00070	-.00391	.00029	.00031	-.00143	-8.09685	-1.96951	-.21883

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BNTN1

(APM020) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9310 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 157.000  
RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 20/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.226	-.00055	-.02310	.08005	-.01233	.00027	.00031	-.00038	125.11679	29.92409	25.16445
2.900	3.961	.00072	.08415	.07707	-.02427	.00032	.00042	-.00101	115.59752	27.06831	26.11638
2.900	8.246	.00142	.20337	.07438	-.03496	.00035	.00057	-.00161	97.51091	24.21253	24.21253
2.900	12.527	.00220	.32282	.07141	-.04683	.00048	.00044	-.00200	77.52044	18.50096	19.45289
2.900	16.847	.00274	.45418	.06881	-.06028	.00055	.00046	-.00235	55.62612	18.50096	17.54904
2.900	21.077	.00217	.59479	.06555	-.07255	.00048	.00047	-.00204	45.15492	20.40482	18.50096
GRADIENT		.00030	.02561	-.00071	-.00285	.00001	.00003	-.00015	-2.27353	-.68206	.22735

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN1 (APM021) ( 06 FEB 74 )

REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.6626 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

RUN NO. 1/ 0 RVL = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
MACH											
4.000	12.418	-.00005	.24297	.06200	-.02922	.00053	.00054	-.00147	8.02977	6.12591	2.31821
4.000	16.526	-.00021	.36044	.06053	-.03430	.00052	.00051	-.00131	7.07784	6.12591	2.31821
4.000	20.599	-.00032	.49785	.06050	-.04278	.00075	.00045	-.00093	5.17399	6.12591	2.31821
4.000	25.703	-.00037	.67676	.05949	-.05512	.00047	.00065	-.00098	5.17399	6.12591	2.31821
4.000	30.767	-.00016	.87078	.05653	-.07587	.00085	.00042	-.00101	6.12591	4.22206	2.31821
4.000	35.932	.00043	1.07688	.05301	-.09886	.00081	.00078	-.00262	5.17399	4.22206	2.31821
GRADIENT		.00002	.03566	-.00036	-.00297	.00001	.00001	-.00003	-.09922	-.09425	-.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN1

(APM022) ( 06 FEB 74 )

REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.6626 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

RUN NO. 0/ 0 RVL = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
MACH											
4.000	12.391	-2.51264	.24274	.06210	-.02733	.00114	.00156	.02860	8.98170	7.07784	2.31821
4.000	16.466	-2.51291	.35945	.06115	-.03422	.00190	.00227	.02756	8.02977	6.12591	1.36628
4.000	20.569	-2.51345	.49640	.06076	-.04071	.00237	.00264	.02802	8.02977	6.12591	1.36628
4.000	25.659	-2.51336	.67558	.05899	-.05488	.00282	.00379	.02671	7.07784	5.17399	1.36628
4.000	30.764	-2.51287	.86311	.05755	-.07258	.00418	.00289	.02694	6.12591	6.12591	1.36628
4.000	35.880	-2.51157	1.07429	.05357	-.09652	.00470	.00415	.02262	8.02977	5.17399	1.36628
GRADIENT		.00004	.03546	-.00034	-.00290	.00015	.00019	-.00020	-.06693	-.06201	-.02729

DATE 06 FEB 74

TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTNI

(APR023) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 19.1132 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = -5.000 PO-JET = .000  
RN/L = 1.000

RUN NO. 7/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.476	-5.04109	.24179	.06163	-.02720	.00255	.00304	.03598	10.88555	8.98170	2.31821
4.000	16.505	-5.04104	.35824	.06137	-.03404	.00383	.00431	.03370	9.93362	8.02977	1.36628
4.000	20.656	-5.04190	.50399	.06951	-.04149	.00593	.00547	.03429	8.98170	8.02977	1.36628
4.000	25.667	-5.04080	.66776	.05879	-.05336	.00630	.00667	.03048	8.02977	7.07784	1.36628
4.000	30.622	-5.04013	.86649	.05813	-.07325	.00639	.00634	.04934	7.07784	7.07784	1.36628
4.000	35.947	-5.03898	1.07190	.05411	-.09609	.00891	.00800	.04509	7.07784	8.98170	1.36628
GRADIENT		.00009	.03543	-.00031	-.00290	.00028	.00019	-.00044	-.17111	-.01961	-.02723

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 19.1132 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 3.000

RUN NO. 11/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.704	-.00438	.25423	.06078	-.03157	.00018	.00030	.00240	20.40482	17.54904	5.17399
4.000	16.868	-.00464	.37382	.05979	-.03934	.00034	.00043	.00235	17.54904	14.69326	5.17399
4.000	21.076	-.00461	.50519	.05922	-.04661	.00034	.00049	.00228	14.69326	12.78940	5.17399
4.000	26.383	-.00390	.69111	.05872	-.06044	.00034	.00032	.00178	11.83748	11.83748	5.17399
4.000	31.708	-.00346	.89174	.05664	-.08002	.00079	.00036	.00173	12.78940	13.74133	5.17399
4.000	37.056	-.00230	1.11015	.05352	-.10417	.00071	.00067	.00052	12.78940	9.93362	5.17399
GRADIENT		.00009	.03521	-.00027	-.00294	.00002	.00001	-.00007	-.31238	-.23871	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BW/NI (AFM025) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8628 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
 RN/L = 5.000

RUN NO. 13/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	FB1	FB2	FB3
4.000	12.955	-.00504	.26131	.06052	-.03215	.00044	.00033	.00151	30.87602	30.87602	8.98170
4.000	17.305	-.00427	.38513	.05937	-.04001	.00041	.00040	.00106	24.21253	25.16445	8.98170
4.000	21.604	-.00392	.52037	.05850	-.04730	.00046	.00044	.00088	23.26060	19.43289	8.98170
4.000	27.212	-.00260	.71743	.05735	-.06321	.00051	.00053	.00023	14.69326	17.54904	8.98170
GRADIENT		.00016	.03204	-.00222	-.00215	.00001	.00001	-.00009	-1.96054	-.95339	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BW/NI

(AFM026) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8628 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 35.000  
 RN/L = 1.000

RUN NO. 2/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	FB1	FB2	FB3
4.000	12.425	-.00063	.23732	.06141	-.02813	.00025	.00041	-.00008	7.07784	3.27013	2.31821
4.000	16.516	-.00077	.36023	.06054	-.03431	.00024	.00038	.00004	7.07784	3.27013	2.31821
4.000	20.566	-.00089	.49152	.06038	-.04166	.00047	.00032	.00047	8.02977	3.27013	2.31821
4.000	25.678	-.00037	.67075	.05732	-.05581	.00023	.00065	-.00099	8.98170	3.27013	2.31821
4.000	30.775	-.00071	.86466	.05586	-.07476	.00033	.00029	.00033	6.12591	3.27013	2.31821
4.000	35.869	-.00010	1.07041	.05250	-.09584	.00005	.00065	-.00132	6.12591	3.27013	2.31821
GRADIENT		.00002	.03555	-.00038	-.00290	-.00001	.00001	-.00004	-.04475	.00000	-.00000





DATE 06 FEB 74 TABULATED SOURCE DATA LARC UPJT 1031 PAGE 57  
NA-7,UPJT 1031,ROCKWELL PRR ORB. CONF. BMTN1 (APMD27) ( 06 FEB 74 )

REFERENCE DATA

SREF = .7245 36.FT. XRRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YRRP = .0000 INCHES  
BREF = 15.1152 INCHES ZRRP = 6.0000 INCHES  
SCALE = .0150

PARAMETRIC DATA

BETA = .000 PO-JET = 100.000  
RN/L = 3.000

RUN NO. 12/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.698	-.00438	.25661	.06091	-.03135	.00026	.00030	.00240	28.02024	7.07784	5.17399
4.000	16.868	-.00464	.37443	.05993	-.03941	.00034	.00043	.00236	22.30867	6.12591	5.17399
4.000	21.111	-.00388	.50716	.05915	-.04633	.00036	.00047	.00179	22.30867	6.12591	5.17399
4.000	26.401	-.00346	.68722	.05831	-.05907	.00019	.00064	.00131	27.06831	6.12591	5.17399
4.000	31.725	-.00341	.88790	.05603	-.07929	.00039	.00037	.00168	25.16445	6.12591	5.17399
4.000	.053	-.00249	1.10831	.05332	-.10364	.00023	.00082	.00046	15.64518	6.12591	5.17399
GRADIENT		.00008	.03496	-.00030	-.00291	-.00000	.00002	-.00007	-.28447	-.02618	-.00000

NA-7,UPJT 1031,ROCKWELL PRR ORB. CONF. BMTN1 (APMD28) ( 06 FEB 74 )

REFERENCE DATA

SREF = .7245 36.FT. XRRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YRRP = .0000 INCHES  
BREF = 15.1152 INCHES ZRRP = 6.0000 INCHES  
SCALE = .0150

PARAMETRIC DATA

BETA = .000 PO-JET = 170.000  
RN/L = 5.000

RUN NO. 14/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.978	-.00443	.26251	.06049	-.03199	.00040	.00036	.00121	48.96263	10.88555	9.93362
4.000	17.306	-.00429	.38513	.05938	-.03963	.00045	.00040	.00107	40.39329	9.93362	8.98170
4.000	21.634	-.00406	.52202	.05839	-.04755	.00051	.00049	.00088	42.29914	9.93362	8.98170
4.000	27.153	-.00272	.71516	.05720	-.06239	.00037	.00037	.00022	42.29914	9.93362	9.93362
GRADIENT		.00012	.03199	-.00023	-.00213	-.00000	.00002	-.00007	-.36807	-.05866	.00014

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN1

(APM029) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XREF = 12.9310 INCHES  
 LREF = 7.8828 INCHES YREF = .0000 INCHES  
 BREF = 15.1152 INCHES ZREF = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 188.000  
 RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 3/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	FB1	PB2	PB3
4.000	12.426	-.00117	.23741	.06085	-.02624	-.00003	.00027	.00127	32.77987	3.27013	2.31821
4.000	16.533	-.00134	.35424	.05981	-.03318	-.00004	.00024	.00144	28.02024	3.27013	2.31821
4.000	20.544	-.00041	.48571	.05880	-.04053	-.00020	.00068	-.00104	20.40482	3.27013	2.31821
4.000	25.709	-.00113	.68469	.05763	-.05292	-.00100	.00096	.00022	11.83748	3.27013	2.31821
4.000	30.781	-.00092	.85276	.05519	-.07260	-.00086	.00074	.00018	7.07784	3.27013	2.31821
4.000	35.896	-.00087	1.06432	.05177	-.09668	-.00119	.00096	-.00011	6.12591	3.27013	2.31821
GRADIENT	.00001	.00001	.03525	-.00037	-.00295	-.00006	.00003	-.00005	-1.22827	.00000	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN1

(APM030) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7243 SQ.FT. XREF = 12.9310 INCHES  
 LREF = 7.8828 INCHES YREF = .0000 INCHES  
 BREF = 15.1152 INCHES ZREF = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 310.000  
 RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 4/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	FB1	PB2	PB3
4.000	12.445	-.00175	.23728	.06010	-.02620	-.00007	.00013	.00267	35.63565	3.27013	2.31821
4.000	16.524	-.00131	.35428	.05875	-.03125	-.00027	.00025	.00138	27.06831	3.27013	2.31821
4.000	20.557	-.00159	.49172	.05866	-.03982	-.00123	.00064	.00152	12.78940	3.27013	2.31821
4.000	25.644	-.00190	.68516	.05744	-.05300	-.00199	.00127	.00144	9.93362	3.27013	2.31821
4.000	30.845	-.00210	.86440	.05535	-.07110	-.00165	.00069	.00275	7.07784	3.27013	2.31821
4.000	35.899	-.00211	1.06440	.05180	-.09294	-.00174	.00090	.00260	6.12591	3.27013	2.31821
GRADIENT	.00003	.00003	.03541	-.00032	-.00285	-.00008	.00003	.00003	-1.24133	-.04724	.00000



NA-7,UPWT (331,ROCKWELL PRR ORG. CONF. BATNI

REFERENCE DATA

WGT = .7245 30.47. 1000 = 12.9510 INCHES  
LWT = 7.0020 INCHES 1000 = .0000 INCHES  
WGT = 15.1152 INCHES 2000 = 6.0000 INCHES  
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 PO-JET = 310.000  
RW/L = 1.000

RUN NO. 5/0 RW/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WGT	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.409	5.04680	.23922	.06181	-.02477	-.00449	-.00293	-.04685	36.58758	3.27013	2.31821
4.000	16.568	5.04685	.36224	.06034	-.03294	-.00620	-.00368	-.04573	14.69326	3.27013	2.31821
4.000	20.598	5.04658	.49400	.06006	-.04043	-.00696	-.00469	-.04417	8.98170	2.31821	1.36628
4.000	25.886	5.04682	.68749	.05817	-.05562	-.00803	-.00588	-.04299	6.12591	2.31721	1.36628
4.000	30.785	5.04593	.85806	.05768	-.06945	-.01012	-.00611	-.04167	5.17399	2.31821	1.36628
4.000	35.847	5.04526	1.06789	.05340	-.09203	-.01077	-.00679	-.03825	4.22206	2.31821	2.31821
GRADIENT		-.00006	.03522	-.00032	-.00281	-.00027	-.00017	.00036	-1.13161	-.04465	-.01483

NA-7,UPWT 1031,ROCKWELL PRR ORG. CONF. BATNI

(APM032) (06 FEB 74)

REFERENCE DATA

WGT = .7245 30.47. 1000 = 12.9510 INCHES  
LWT = 7.0020 INCHES 1000 = .0000 INCHES  
WGT = 15.1152 INCHES 2000 = 6.0000 INCHES  
SCALE = .0150

PARAMETRIC DATA

BETA = -2.500 PO-JET = 310.000  
RW/L = 1.000

RUN NO. 9/0 RW/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WGT	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.410	-2.51328	.24274	.06196	-.02733	.00110	.00121	.02999	36.58758	4.22206	1.36628
4.000	16.327	-2.51344	.35955	.06087	-.03235	.00138	.00215	.02805	29.92109	3.27013	1.36628
4.000	20.575	-2.51398	.48478	.05644	-.03845	.00185	.00249	.02939	36.50758	3.27013	1.36628
4.000	25.679	-2.51367	.67009	.05712	-.05194	.00095	.00446	.02642	15.64518	3.27013	1.36628
4.000	30.752	-2.51385	.85786	.05645	-.06972	.00224	.00364	.02807	7.07784	2.31821	1.36628
4.000	35.909	-2.51241	1.06298	.05219	-.09256	.00251	.00469	.02368	6.12591	2.31821	1.36628
GRADIENT		.00002	.03509	-.00038	-.00276	.00005	.00014	-.00023	-1.47875	-.07445	.00000

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTNI

(APM033) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 90.FT. XREF = 12.9510 INCHES  
 LREF = 7.8828 INCHES YREF = .0000 INCHES  
 BREF = 15.1152 INCHES ZREF = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = -5.000 PO-JET = 310.000  
 RN/L = 1.000

RUN NO. 8/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.438	-5.04032	.25181	.06155	-.02718	.00259	.00318	.05458	43.25107	3.27013	2.31821
4.000	16.538	-5.04066	.36419	.06114	-.03514	.00359	.00431	.05359	38.49143	3.27013	2.31821
4.000	20.642	-5.04190	.49477	.06003	-.04040	.00479	.00548	.05428	29.92409	3.27013	2.31821
4.000	25.657	-5.04303	.66914	.05714	-.05151	.00511	.00691	.05022	34.68372	3.27013	2.31821
4.000	30.761	-5.03982	.85579	.05621	-.07116	.00629	.00736	.04761	15.64518	3.27013	1.36628
4.000	35.866	-5.03911	1.06266	.05221	-.09209	.00677	.00847	.04472	11.83748	3.27013	2.31821
GRADIENT		.00007	.03491	-.00039	-.00272	.00018	.00022	-.00044	-1.34383	.00000	-.01736

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTNI

(APM034) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 90.FT. XREF = 12.9510 INCHES  
 LREF = 7.8828 INCHES YREF = .0000 INCHES  
 BREF = 15.1152 INCHES ZREF = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 537.000  
 RN/L = 3.000

RUN NO. 91/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.717	-.00495	.25681	.05067	-.03134	.00024	.00026	.00287	73.71273	6.12591	6.12591
4.000	16.699	-.00450	.37445	.05033	-.03675	.00034	.00036	.00235	76.56851	6.12591	6.12591
4.000	21.129	-.00514	.50522	.05015	-.04593	.00017	.00045	.00271	53.72226	7.07784	7.07784
4.000	26.346	-.00410	.69520	.05735	-.05673	-.00068	.00108	.00117	35.63565	6.12591	6.12591
4.000	31.690	-.00416	.89629	.05553	-.07836	-.00065	.00069	.00151	18.51096	6.12591	5.17399
4.000	37.035	-.00414	1.10277	.05276	-.10219	-.00091	.00111	.00124	10.68555	6.12591	5.17399
GRADIENT		.00004	.03485	-.00030	-.00287	-.00036	.00004	-.00007	-2.96026	-.00720	-.05274



... 4A-7, INPUT 1031, ROCKWELL PRR ORG. CONF. BUTNI

REFERENCE DATA

SPOT = .7245 88.47. 100P = 12.9310 INCHES  
LREQ = 7.8828 INCHES 100P = .0000 INCHES  
SPOT = 15.1152 INCHES 100P = 6.0000 INCHES  
SCALE = .0150

PARAMETRIC DATA

BETA = .000 PO-JET = 600.000  
RM/L = 1.000

RUN NO. 10/ 0 RM/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

W/LON	ALPHA	BETA	ON	CA	CLN	CM	CYN	CY	PB1	PB2	PB3
4.000	12.418	-.00356	.23785	.06033	-.02447	-.00139	-.00025	.00661	34.68372	3.27013	1.36628
4.000	16.903	-.00387	.34923	.05868	-.02851	-.00234	.00137	.00665	21.35675	3.27012	1.36628
4.000	20.608	-.00419	.48640	.05628	-.03697	-.00283	.00075	.00689	11.83748	3.27013	1.36628
4.000	25.687	-.00461	.68073	.05600	-.04829	-.00362	.00159	.00677	8.98170	2.31821	1.36628
4.000	30.762	-.00504	.85375	.05534	-.06719	-.00305	.00023	.00961	6.12591	2.31821	1.36628
4.000	35.957	-.00410	1.04518	.05251	-.09131	-.00353	.00116	.00649	5.17399	2.31821	1.36628
GRADIENT		-.00034	.03529	-.00031	-.00282	-.00008	.00004	.00005	-1.15408	-.05197	.00000

DATE 06 FEB 74 TABULATED SOURCE DATA LARC UFWT 1031

(APND36) ( 06 FEB 74 )

MA-7,UFWT 1031,ROCKWELL FRR ORB. CONF. BUTN4

REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 PO-JET = .000  
 RN/L = 3.000

RUN NO. 37/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	FB1	FB2	FB3
2.500	-.216	.00140	-.01998	.08722	-.02819	-.00018	.00035	-.00113	105.86669	129.66486	53.51070
2.500	4.070	.00255	.10861	.08419	-.02567	.00010	.00019	-.00146	101.10705	111.57825	56.36648
2.500	8.460	.00380	.23795	.08107	-.04295	.00022	.00025	-.00212	85.87622	95.39549	48.75107
2.500	12.685	.00431	.36432	.07751	-.05692	.00034	.00032	-.0045	60.17419	82.06851	43.99143
2.500	16.962	.00346	.50201	.07429	-.07159	.00027	.00027	-.00195	44.94336	67.78961	35.42409
2.500	21.306	.00361	.64999	.07081	-.08611	.00028	.00039	-.00213	30.66445	53.51070	35.42409
GRADIENT		.00027	.03003	-.00071	-.00408	.00007	-.00004	-.00008	-1.11051	-4.21993	.66630

RUN NO. 39/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	FB1	FB2	FB3
2.950	-.182	.00031	-.02428	.08012	-.01173	.00026	.00021	-.00045	71.59732	83.97237	27.80867
2.950	4.065	.00157	.08384	.07701	-.02458	.00028	.00034	-.00129	72.54924	72.54924	18.76010
2.950	8.363	.00131	.20446	.07459	-.03550	.00022	.00037	-.00119	55.41456	59.22226	25.90482
2.950	12.671	.00206	.32324	.07138	-.04649	.00040	.00022	-.00137	36.37602	48.75107	24.00096
2.950	16.769	.00257	.45020	.06893	-.06920	.00041	.00025	-.00165	26.85675	41.13565	19.24133
2.950	21.026	.00295	.59210	.06608	-.07290	.00054	.00040	-.00200	20.19326	32.56831	19.24133
GRADIENT		.00030	.02546	-.00073	-.00303	.00000	.00003	-.00020	.22414	-2.68969	.22414

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TABULATED SOURCE DATA LARC UPWT 1031

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NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BJTNA

(APM037) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 151.000  
RN/L = 3.000

RUN NO. 40/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	CN	CA	CLM	CEL	CYN	CI	PB1	PB2	PB3
2.900	-.234	-.00029	-.03008	.07732	-.00860	.00013	.00017	-.00008	72.54924	84.92429	32.56831
2.900	4.046	.00116	.07963	.07458	-.02128	.00003	.00026	-.00097	74.45310	72.54924	32.56831
2.900	6.207	.00012	.19590	.07269	-.03237	.00001	.00030	-.00046	56.36648	59.22226	28.76060
2.900	12.485	.00145	.31293	.06875	-.04301	.00015	.00018	-.00100	36.37602	48.75107	26.85675
2.900	16.770	.00164	.44743	.06628	-.05669	.00009	.00014	-.00099	25.90482	41.13505	23.04904
2.900	21.034	.00095	.56654	.06342	-.06840	-.00016	.00022	-.00079	21.14518	33.52024	23.04904
GRADIENT		.00034	.02563	-.00064	-.00296	-.00002	.00002	-.00021	.44483	-2.89137	.00000

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BJTNA

(APM038) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 185.000  
RN/L = 3.000

RUN NO. 38/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	CN	CA	CLM	CEL	CYN	CI	PB1	PB2	PB3
2.900	-.174	.00078	-.02388	.08457	-.00563	-.00019	.00032	-.00079	104.91476	129.66486	57.31841
2.900	4.069	.00225	.10226	.08174	-.02266	-.00013	.00007	-.00115	102.05898	111.57825	55.41456
2.900	6.332	.00291	.23016	.07953	-.03963	-.00001	.00009	-.00149	87.78007	96.34742	48.73107
2.900	12.641	.00289	.35751	.07515	-.05301	.00004	.00013	-.00152	60.17419	83.02044	45.89529
2.900	16.985	.00307	.49577	.07143	-.06773	-.00006	.00020	-.00166	44.94336	67.78961	43.03951
2.900	21.266	.00273	.64131	.06781	-.08095	-.00044	.00030	-.00159	33.52024	60.17419	43.03951
GRADIENT		.00035	.02972	-.00067	-.00401	.00011	-.00016	-.00008	-.67306	-4.26269	-.44870

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BWJN4

(APMD39) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

ALPHA = 27.500  
RN/L = 1.000

RUN NO. 830/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	PO-JET	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	-.547	-.00267	.79566	.05874	-.06990	.00035	.00087	.00517	5.91435	5.91435	4.01050
4.000		-.00210	.79633	.05836	-.06996	.00039	.00101	.00377	4.01050	4.01050	4.01050
4.000	36.131	-.00279	.79383	.05585	-.06688	-.00013	.00109	.00513	4.96243	4.96243	4.01050
4.000	196.760	-.00240	.78026	.04892	-.05705	-.00376	.00511	-.00106	4.96243	4.96243	4.01050
4.000	327.310	-.00276	.76885	.04340	-.04895	-.00471	.00575	-.00115	4.01050	4.96243	4.01050
4.000	601.246	-.00320	.75179	.03812	-.03565	-.00523	.00539	-.00026	4.01050	4.01050	4.01050
GRADIENT		.00125	.00147	-.00084	-.00013	.00009	.00031	-.00308	-4.18429	-4.18429	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BWJN4

(APMD40) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 1.000

RUN NO. 26/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.447	-.00120	.24425	.06302	-.02994	.00042	.00016	.00242	8.77013	7.81821	4.96243
4.000	16.485	-.00079	.36149	.06228	-.03703	.00044	.00029	.00150	7.81821	6.86628	4.96243
4.000	20.642	-.00069	.50129	.06172	-.04491	.00067	.00033	.00186	6.86628	6.86628	4.96243
4.000	25.646	-.00096	.67606	.05904	-.05887	.00044	.00058	.00186	5.91435	6.86628	4.96243
4.000	30.766	-.00059	.87508	.05698	-.08077	.00091	.00015	.00180	5.91435	6.86628	4.01050
4.000	35.892	-.00012	1.08561	.05904	-.10478	.00096	.00071	.00019	5.91435	5.91435	4.01050
GRADIENT		.00004	.03598	-.00042	-.00318	.00002	.00002	-.00006	-.12418	-.05717	-.04722



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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7, UPWT 1031, ROCKWELL PER ORB. CONF. BATM4

(APMD41) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8628 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = -2.500 PO-JET = .000  
 RN/L = 1.000

RUN NO. 34/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	ON	CA	CLM	CSL	CYN	CY	PB1	PB2	PB3
4.000	12.434	-2.51257	.25535	.06127	-.03004	.00187	.00200	.02837	8.77013	7.81821	4.01050
4.000	16.515	-2.51333	.37803	.06077	-.03815	.00258	.00281	.02902	7.81821	7.81821	4.01050
4.000	20.576	-2.51316	.51758	.06026	-.04788	.00310	.00340	.02805	6.86628	6.86628	4.01050
4.000	25.713	-2.51365	.70377	.05840	-.06214	.00335	.00428	.02810	5.91435	6.86628	4.01050
4.000	30.775	-2.51315	.89088	.05683	-.07982	.00325	.00337	.02841	5.91435	6.86628	4.01050
4.000	35.928	-2.51181	1.10695	.05218	-.10295	.00562	.00463	.02402	6.86628	5.91435	4.01050
GRADIENT		.00003	.03628	-.00036	-.00307	.00016	.00009	-.00015	-.09414	-.07441	.00000

MA-7, UPWT 1031, ROCKWELL PER ORB. CONF. BATM4

(APMD42) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8628 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = -3.000 PO-JET = .000  
 RN/L = 1.000

RUN NO. 31/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	ON	CA	CLM	CSL	CYN	CY	PB1	PB2	PB3
4.000	12.474	-5.04082	.26044	.06254	-.03108	.00353	.00348	.05583	10.67399	9.72206	4.01050
4.000	16.543	-5.04132	.37733	.06158	-.03805	.00452	.00484	.05521	10.67399	8.77013	4.01050
4.000	20.675	-5.04205	.52259	.06115	-.04882	.00572	.00570	.05579	8.77013	8.77013	4.01050
4.000	25.667	-5.04107	.69724	.05923	-.06078	.00704	.00717	.05194	7.81821	7.81821	4.01050
4.000	30.753	-5.04042	.88971	.05803	-.07953	.00923	.00703	.05087	6.86628	7.81821	4.01050
4.000	35.916	-5.03925	1.10612	.05389	-.10268	.01009	.00849	.04659	6.86628	8.77013	4.01050
GRADIENT		.00007	.03613	-.00034	-.00302	.00029	.00020	-.00039	-.18904	-.04958	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTM4

(AFMD43) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 94.FT. XGRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YGRP = .0000 INCHES  
BREF = 15.1152 INCHES ZGRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 3.000

RUN NO. 21/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.976	-.00069	.25618	.06063	-.03331	.00040	.00040	-.00002	21.14518	20.19326	7.81821
4.000	16.865	-.00083	.37586	.05956	-.04145	.00056	.00047	.00003	17.33740	16.38555	7.81821
4.000	21.079	-.00062	.50918	.05896	-.04921	.00037	.00050	-.00008	14.48170	14.48170	7.81821
4.000	26.360	-.00001	.69695	.05837	-.06299	.00031	.00061	-.00061	11.62591	14.48170	7.81821
4.000	31.711	-.00069	.90408	.05605	-.08436	.00104	.00036	.00026	11.62591	14.48170	7.81821
4.000	37.049	.00109	1.12400	.05300	-.10886	.00083	.00072	-.00143	11.62591	11.62591	7.81821
GRADIENT		.00006	.03575	-.00029	-.00396	.00002	.00001	-.00004	-.38384	-.27670	.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTM4

(AFMD44) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 94.FT. XGRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YGRP = .0000 INCHES  
BREF = 15.1152 INCHES ZGRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 5.000

RUN NO. 24/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.962	-.00325	.26456	.06022	-.03322	.00041	.00040	.00087	29.71253	32.56831	12.57784
4.000	17.299	-.00313	.38722	.05906	-.04095	.00051	.00044	.00078	23.04904	25.90482	11.62591
4.000	21.633	-.00256	.52571	.05827	-.04901	.00047	.00047	.00055	22.09711	21.14518	11.62591
4.000	27.151	-.00187	.71905	.05706	-.06445	.00058	.00053	.00022	15.43362	19.24133	11.62591
GRADIENT		.00010	.03211	-.00022	-.00219	.00001	.00001	-.00005	-.93624	-.93707	-.05862

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TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTM4 (APMD45) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9310 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 37.000  
RN/L = 1.000

RUN NO. 27/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.433	-.00048	.23260	.05972	-.02371	-.00003	.00009	.00098	6.86628	7.81821	4.01050
4.000	16.913	-.00062	.35546	.05921	-.03389	-.00004	.00009	.00142	6.86628	6.86628	4.01050
4.000	20.577	-.00073	.49515	.05929	-.04369	.00019	.00019	.00178	5.91435	7.81821	4.01050
4.000	25.831	-.00092	.67508	.05659	-.05876	-.00004	.00060	.00176	5.91435	6.86628	4.96243
4.000	30.775	-.00071	.86857	.05462	-.07763	.00044	.00136	.00175	5.91435	5.91435	4.01050
4.000	35.913	.00024	1.07893	.05058	-.10164	.00005	.00129	-.00135	4.96243	5.91435	4.96243
GRADIENT		.00002	.03605	-.00038	-.00320	.00001	.00004	-.00007	-.07439	-.08176	.03495

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTM4

(APMD46) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9310 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 99.000  
RN/L = 1.000

RUN NO. 35/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.416	-.00253	.25048	.05594	-.02317	-.00037	.00032	.00503	7.81821	7.81821	4.01050
4.000	16.922	-.00293	.36767	.05323	-.03029	-.00086	.00074	.00543	6.86628	7.81821	4.01050
4.000	20.617	-.00285	.50735	.05448	-.04005	-.00082	.00156	.00438	5.91435	6.86628	4.01050
4.000	25.698	-.00282	.68809	.05242	-.05331	-.00173	.00281	.00282	4.96243	4.96243	4.01050
4.000	30.777	-.00245	.86707	.05124	-.07335	-.00125	.00238	.00276	4.96243	4.96243	4.01050
4.000	35.914	-.00163	1.09754	.04723	-.09737	-.00144	.00274	.00110	4.01050	4.96243	4.01050
GRADIENT		.00003	.03624	-.00035	-.00313	-.00004	.00011	-.00018	-.15385	-.14879	.00000

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTM4

(APMD47) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8628 INCHES YMRP = .0000 INCHES  
 BREF = 19.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 103.000  
 RN/L = 3.000

RUN NO. 22/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
NACH	12.874	-.00150	.25285	.03850	-.03066	.00006	.00017	.00086	18.28940	19.24133	9.72206
4.000											
4.000	16.908	-.00099	.37219	.03724	-.03787	-.00001	.00030	.00038	16.38555	16.38555	8.77013
4.000	21.069	-.00154	.50633	.05683	-.04596	.00006	.00034	.00077	12.57784	14.48170	9.72206
4.000	26.454	-.00135	.69426	.05605	-.06038	.00000	.00067	.00026	13.52977	14.48170	8.77013
4.000	31.720	-.00015	.90337	.05416	-.08168	.00050	.00049	-.00029	11.62591	11.62591	8.77013
4.000	37.130	.00155	1.12218	.05113	-.10656	.00024	.00126	-.00247	11.62591	11.62591	8.77013
GRADIENT		.00011	.03558	-.00028	-.00308	.00001	.00004	-.00011	-.26380	-.29976	-.03343

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTM4

(APMD48) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8628 INCHES YMRP = .0000 INCHES  
 BREF = 19.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 178.000  
 RN/L = 5.000

RUN NO. 25/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
NACH	12.926	-.00410	.25886	.03793	-.03013	.00016	.00026	.00142	28.76060	32.56831	15.43362
4.000											
4.000	17.287	-.00317	.36276	.05676	-.03734	.00007	.00030	.00100	22.09711	26.85675	14.48170
4.000	21.649	-.00287	.52072	.05597	-.04574	-.00002	.00041	.00077	20.19326	22.09711	14.48170
4.000	27.134	-.00145	.71339	.05484	-.06139	.00001	.00065	-.00013	21.14518	25.90482	14.48170
GRADIENT		.00018	.03200	-.00021	-.00219	-.00001	.00003	-.00011	-.50359	-.49579	-.05852

NA-7,UPWT 1031,ROCKWELL PRR ORG. CONF. BJT/M

(APM049) ( 06 FEB 74 )

## REFERENCE DATA

SRGT = .7245 98.4FT. 198P = 12.9510 INCHES  
LRGT = 7.8828 INCHES 198P = .0000 INCHES  
BRGT = 19.1132 INCHES 298P = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 199.000  
RM/L = 1.000

## PARAMETRIC DATA

RUN NO. 28/ 0 RM/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.421	-.00119	.22128	.05180	-.01945	-.00168	.00138	.00076	6.86628	7.81821	4.01050
4.000	16.539	-.00085	.33838	.05105	-.02485	-.00208	.00272	-.00161	6.86628	6.86628	4.01050
4.000	20.562	-.00040	.47833	.05079	-.03452	-.00295	.00412	-.00425	5.91435	5.91435	4.01050
4.000	25.683	-.00012	.65883	.04915	-.04778	-.00362	.00495	-.00377	4.96243	4.96243	4.01050
4.000	30.808	-.00086	.85720	.04758	-.06770	-.00232	.00302	-.00147	4.96243	4.96243	4.01050
4.000	35.958	-.00050	1.06711	.04411	-.09162	-.00137	.00258	-.00150	4.01050	4.96243	4.01050
GRADIENT		.00002	.03613	-.00031	-.00307	.00001	.00004	-.00006	-.12623	-12366	.00000

NA-7,UPWT 1031,ROCKWELL PRR ORG. CONF. BJT/M

(APM050) ( 06 FEB 74 )

## REFERENCE DATA

SRGT = .7245 98.4FT. 198P = 12.9510 INCHES  
LRGT = 7.8828 INCHES 198P = .0000 INCHES  
BRGT = 19.1132 INCHES 298P = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 328.000  
RM/L = 1.000

## PARAMETRIC DATA

RUN NO. 29/ 0 RM/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.394	-.00046	.21824	.04518	-.01064	-.00412	.00473	-.00325	6.86628	7.81821	4.01050
4.000	16.500	-.00023	.33369	.04396	-.01775	-.00476	.00629	-.00767	6.86628	6.86628	4.96243
4.000	20.540	-.00105	.46795	.04476	-.02655	-.00505	.00641	-.00594	4.96243	5.91435	4.01050
4.000	25.676	-.00063	.65445	.04406	-.03904	-.00348	.00703	-.00746	4.96243	4.96243	4.01050
4.000	30.784	-.00182	.84699	.04164	-.05966	-.00308	.00352	-.00301	4.01050	4.96243	4.01050
4.000	35.889	-.00086	1.05762	.03795	-.08173	-.00232	.00322	-.00160	4.01050	4.96243	4.01050
GRADIENT		-.00004	.03596	-.00027	-.00301	.00009	-.00010	.00025	-.13625	-12391	-.01730

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTNA

(APM051) ( 06 FEB 74 )

## REFERENCE DATA

SRF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1192 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = -2.500 PO-JET = 328.000  
RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 33/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.468	-2.51273	.23333	.04371	-.01192	-.00227	.00587	.02354	8.77013	9.72206	4.01050
4.000	16.359	-2.51271	.35037	.04460	-.01707	-.00219	.00761	.02130	9.72206	9.72206	4.01050
4.000	20.657	-2.51261	.49029	.04360	-.02501	-.00305	.00985	.01871	8.77013	8.77013	4.01050
4.000	25.696	-2.51261	.67060	.04323	-.04010	-.00234	.00987	.01887	6.86628	6.86628	4.01050
4.000	30.793	-2.51260	.86309	.04151	-.05879	.00066	.00718	.02214	4.96243	4.96243	4.01050
4.000	35.875	-2.51162	1.07353	.03851	-.08273	.00190	.00709	.02076	4.01050	4.96243	4.01050
GRADIENT		.00003	.03602	-.00028	-.00303	.00319	.00062	-.00006	-.24631	-.24388	.00000

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BUTNA

(APM052) ( 06 FEB 74 )

## REFERENCE DATA

SRF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1192 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = -5.000 PO-JET = 328.000  
RN/L = 1.000

## PARAMETRIC DATA

RUN NO. 32/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.478	-5.03977	.23273	.04603	-.01185	-.00121	.00862	.04671	10.67399	10.67399	4.01050
4.000	16.691	-5.04009	.35526	.04519	-.01803	-.00045	.00979	.04597	10.67399	10.67399	4.01050
4.000	20.732	-5.03972	.49494	.04539	-.02780	-.00008	.01211	.04224	10.67399	9.72206	4.01050
4.000	25.747	-5.03941	.66343	.04340	-.03865	.00163	.01247	.04132	7.81821	6.86628	4.01050
4.000	30.768	-5.03910	.85618	.04269	-.05740	.00425	.01176	.04176	6.86628	5.91435	4.01050
4.000	35.897	-5.03806	1.07212	.03939	-.08239	.00596	.01123	.04040	5.91435	4.96243	4.01050
GRADIENT		.00007	.03580	-.00026	-.00296	.00032	.00011	-.00027	-.23423	-.27920	.00000

DATE 06 FEB 74

TABULATED SOURCE DATA LARC UPWT 1031

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NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BATTM

(APM053) ( 06 FEB 74 )

## REFERENCE DATA

9827 = .7245 30.FT. 100P = 12.9510 INCHES  
1007 = 7.0028 INCHES 100P = .0000 INCHES  
9827 = 15.1132 INCHES 200P = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 559.000  
RN/L = 3.000

RUN NO. 25/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.635	-.00310	.24554	.03123	-.02323	-.00106	.00045	.00162	18.28940	20.19326	.72206
4.000	16.679	-.00237	.36374	.03024	-.02995	-.00205	.00172	-.00041	17.33748	19.24133	9.72206
4.000	21.679	-.00245	.49757	.04843	-.03637	-.00306	.00363	-.00296	15.43362	14.48170	10.67399
4.000	26.403	-.00219	.68772	.04835	-.05126	-.00391	.00470	-.00453	11.62591	12.57784	10.67399
4.000	31.733	-.00266	.89167	.04695	-.07154	-.00285	.00357	-.00261	10.67399	11.62591	10.67399
4.000	37.047	-.00250	1.10949	.04456	-.09566	-.00237	.00335	-.00275	10.67399	11.62391	9.72206
GRADIENT		.00003	.03555	-.00025	-.00295	-.00005	.00012	-.00017	-.35785	-.38625	.01421

NA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BATTM

(APM054) ( 06 FEB 74 )

## REFERENCE DATA

9827 = .7245 30.FT. 100P = 12.9510 INCHES  
1007 = 7.0028 INCHES 100P = .0000 INCHES  
9827 = 15.1132 INCHES 200P = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 600.000  
RN/L = 1.000

RUN NO. 30/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.400	-.00022	.20026	.03360	.00426	-.00960	.01114	-.01433	6.86628	7.81821	4.01050
4.000	16.541	-.00008	.32315	.03395	-.00396	-.00757	.01170	-.01525	6.86628	6.86628	4.01050
4.000	21.607	-.00124	.46285	.03409	-.01163	-.00823	.01026	-.01366	4.96243	4.96243	4.01050
4.000	25.694	-.00209	.65475	.03445	-.02726	-.00650	.00739	-.00484	4.01050	4.96243	4.01050
4.000	30.917	-.00249	.83295	.03184	-.04711	-.00449	.00481	-.00040	4.01050	4.96243	4.01050
4.000	35.896	-.00179	1.05615	.02895	-.07304	-.00421	.00494	-.00193	4.01050	4.96243	4.01050
GRADIENT		-.00009	.03680	-.00019	-.00315	.00022	-.00033	.00068	-.14136	-.11651	.00000

REFERENCE DATA

SREF = 7845 SQ.FT. YMRP = 12.9510 INCHES  
 LREF = 7.8888 INCHES YMRP = .0000 INCHES  
 BREF = 15.1192 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0190

PARAMETRIC DATA

BETA = .000 PO-JET = .000  
 RV/L = 3.000

RUN NO. 41/ 0 RV/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLK	CBL	CYN	CY	PB1	PB2	PB3
2.900	-1.195	.00122	-.01901	.06734	-.00060	-.00007	.00039	-.00105	105.38210	129.18028	53.97804
2.900	4.095	.00341	.10637	.06403	-.02567	-.00001	.00010	-.00154	101.57479	110.14174	56.83383
2.900	6.440	.00448	.23673	.06102	-.04220	.00028	.00024	-.00232	85.39164	93.00705	52.07419
2.900	12.665	.00499	.36271	.07749	-.05621	.00029	.00029	-.00267	58.73768	79.68007	45.41070
2.900	16.992	.00404	.50134	.07443	-.07163	.00029	.00035	-.00246	43.50685	65.40117	37.79529
2.900	21.468	.00328	.63425	.07089	-.08642	.00025	.00055	-.00316	31.13180	52.07419	36.84336
GRADIENT		.00052	.02990	-.00078	-.00397	.00001	-.00007	-.00012	-.89593	-4.47966	.67195

RUN NO. 43/ 0 RV/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLK	CBL	CYN	CY	PB1	PB2	PB3
2.990	-.214	.00021	-.02015	.07982	-.01202	.00026	.00026	-.00040	72.06466	83.48778	28.27602
2.990	4.006	.00175	.06720	.07705	-.02474	.00027	.00026	-.00104	72.06466	71.11273	29.22794
2.990	6.273	.00186	.20462	.07472	-.03556	.00028	.00041	-.00140	53.97804	57.78575	26.37216
- 2.990	12.909	.00193	.32320	.07180	-.04651	.00041	.00034	-.00160	35.89143	48.26648	23.51638
2.990	16.742	.00393	.45553	.06948	-.06043	.00039	.00021	-.00087	23.51638	38.74721	18.75675
2.990	21.032	.00144	.59804	.06652	-.07348	.00057	.00027	-.00105	18.75675	31.13180	19.70867
GRADIENT		.00036	.02544	-.00066	-.00001	.00000	.00000	-.00015	.00000	-2.93248	.22557



DATE 06 FEB 74

TABULATED SOURCE DATA LARC UPUT 1031

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NA-7, UPUT 1031, ROCKWELL PRR ORG. CONF. BATM40

(APR056) ( 06 FEB 74 )

## REFERENCE DATA

SRCT = .7245 30.FT. YARP = 12.9510 INCHES  
LWRT = 7.0000 INCHES YARP = .0000 INCHES  
SRCT = 13.1132 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 151.000  
RW/L = 3.000

## PARAMETRIC DATA

RUN NO. 44/ 0 RW/L = 3.00 GRADIENT INTERVAL = -3.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
2.900	-.263	-.00078	-.02444	.07777	-.00968	.00005	.00014	.00029	71.11273	84.43971	30.17987
2.900	4.190	.00056	.09030	.07475	-.02233	.00007	.00025	-.00039	72.06466	70.16080	31.13180
2.900	8.265	.00078	.20189	.07275	-.03205	.00002	.00034	-.00073	55.88190	57.78575	29.22794
2.900	12.478	.00196	.31848	.06933	-.04319	.00017	.00034	-.00162	35.89143	47.31456	26.37216
2.900	16.896	.00215	.45464	.06882	-.05677	.00017	.00028	-.00162	24.46831	39.89914	23.51636
2.900	21.068	.00388	.59126	.06412	-.06875	-.00016	.00030	-.00079	20.66060	33.98758	23.51636
GRADIENT		.00031	.02577	-.00068	-.00284	.00000	.00002	-.00015	.21377	-3.20658	.21377

NA-7, UPUT 1031, ROCKWELL PRR ORG. CONF. BATM40

(APR057) ( 06 FEB 74 )

## REFERENCE DATA

SRCT = .7245 30.FT. YARP = 12.9510 INCHES  
LWRT = 7.0000 INCHES YARP = .0000 INCHES  
SRCT = 13.1132 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 196.000  
RW/L = 3.000

## PARAMETRIC DATA

RUN NO. 42/ 0 RW/L = 3.00 GRADIENT INTERVAL = -3.00/ 5.00

NAOH	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
2.900	-.185	.00222	-.02151	.08507	-.00567	-.00017	.00028	-.00138	104.43018	126.22835	56.83383
2.900	4.170	.00350	.10657	.08192	-.02375	-.00022	.00011	-.00159	101.57439	109.18981	56.83383
2.900	8.357	.00454	.23890	.07940	-.03928	.00001	.00024	-.00235	88.24742	93.00705	50.17034
2.900	12.636	.00412	.34055	.07546	-.05315	-.00004	.00026	-.00241	59.68961	79.68007	46.36263
2.900	16.977	.00393	.57753	.07214	-.06839	-.00026	.00024	-.00226	43.59685	65.40117	42.55492
2.900	21.291	.00287	.64472	.06837	-.08116	-.00043	.00036	-.00167	32.08372	59.68961	42.55492
GRADIENT		.00030	.03010	-.00074	-.00408	-.00001	-.00004	-.00005	-.67116	-4.47439	-.00000

DATE 06 FEB 74 TABULATED SOURCE DATA LARC UPLAT 1031

MA-7,UPLAT 1031,ROCKWELL PRR ORB. CONF. BUTRAD (APM058) ( 06 FEB 74 )

REFERENCE DATA

SRGT = .7245 98.FT. WARP = 12.9510 INCHES  
 LRG7 = 7.6826 INCHES WARP = .0000 INCHES  
 BRGT = 15.1152 INCHES ZWRP = 6.0000 INCHES  
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 PO-JET = .000  
 RN/L = 1.000

RUN NO. 48/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CSL	CYN	CY	PB1	PB2	PB3
4.000	12.405	-.00045	.25884	.06145	-.03073	.00048	.00053	.00033	5.42977	7.33362	3.52591
4.000	16.515	-.00022	.36014	.05048	-.03712	.00052	.00069	-.00095	5.42977	6.36170	2.57399
4.000	25.538	-.00032	.49695	.06054	-.04727	.00073	.00057	.00006	4.47764	6.36170	2.57399
4.000	25.713	-.00037	.67620	.05895	-.06072	.00049	.00078	-.00007	4.47764	6.36170	2.57399
4.000	30.768	-.00014	.87645	.05796	-.06260	.00100	.00066	-.00118	4.47764	6.36170	2.57399
4.000	35.930	-.00010	1.08859	.05451	-.10472	.00104	.00096	-.00248	3.52591	5.42977	3.52591
GRADIENT		.00002	.03625	-.00027	-.00317	.00002	.00001	-.00009	-.07430	-.03702	.00253

MA-7,UPLAT 1031,ROCKWELL PRR ORB. CONF. BUTRAD (APM059) ( 06 FEB 74 )

REFERENCE DATA

SRGT = .7245 98.FT. WARP = 12.9510 INCHES  
 LRG7 = 7.6826 INCHES WARP = .0000 INCHES  
 BRGT = 15.1152 INCHES ZWRP = 6.0000 INCHES  
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 PO-JET = .000  
 RN/L = 3.000

RUN NO. 45/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CSL	CYN	CY	PB1	PB2	PB3
4.000	12.472	-.00043	.25423	.06040	-.03358	.00041	.00034	-.00029	17.80482	18.75675	7.33362
4.000	16.915	-.00008	.37592	.05961	-.04160	.00043	.00054	-.00080	14.94904	15.90096	7.33362
4.000	21.073	.00007	.50362	.05696	-.04930	.00051	.00050	-.00064	13.04518	13.99711	7.33362
4.000	26.321	.00084	.69466	.05827	-.06366	.00053	.00054	-.00130	9.23748	13.99711	7.33362
4.000	31.713	.00083	.89736	.05672	-.06401	.00100	.00050	-.00124	9.23748	13.99711	7.33362
4.000	37.108	.00233	1.11540	.05350	-.10847	.00081	.00064	-.00330	11.14133	11.14133	7.33362
GRADIENT		.00010	.03156	-.00026	-.00303	.00002	.00001	-.00010	-.30743	-.25021	.00000

REFERENCE DATA  
SLOT = .7245 30.47. WARP = 12.9410 INCHES  
LREQ = 7.8828 INCHES WARP = .0000 INCHES  
SLOT = 15.1132 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150  
BETA = .000 PO-JET = 37.000  
RW/L = 1.000

PARAMETRIC DATA

RUN NO. 49/ 0 RW/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00											
WACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.345	.00009	.23264	.03979	-.02763	.00004	.00046	-.00115	5.42977	7.33362	2.57399
4.000	16.472	-.00079	.35404	.03900	-.03994	.00024	.00055	.00044	5.42977	7.33362	3.52591
4.000	20.536	-.00018	.49101	.03943	-.04423	.00049	.00036	.00005	4.47784	7.33362	2.57399
4.000	25.709	-.00021	.67538	.03600	-.05875	.00025	.00057	-.00015	4.47784	6.36170	3.52591
4.000	30.706	-.00001	.86575	.03625	-.07653	.00076	.00044	-.00117	4.47784	5.42977	2.57399
4.000	36.043	.00051	1.06948	.03210	-.10474	.00061	.00113	-.00402	2.57399	5.42977	3.52591
GRADIENT		.00005	.03517	-.00030	-.00320	.00002	.00002	-.00012	-.10362	-.09852	.01747

REFERENCE DATA  
SLOT = .7245 30.47. WARP = 12.9410 INCHES  
LREQ = 7.8828 INCHES WARP = .0000 INCHES  
SLOT = 15.1132 INCHES ZARP = 6.0000 INCHES  
SCALE = .0150  
BETA = .000 PO-JET = 103.000  
RW/L = 1.000

PARAMETRIC DATA

RUN NO. 53/ 0 RW/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00											
WACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.465	-.00160	.25648	.05693	-.02433	-.00031	.00049	.00280	5.42977	7.33362	2.57399
4.000	16.475	-.00153	.37223	.05468	-.03162	-.00027	.00065	.00161	5.42977	7.33362	2.57399
4.000	20.609	-.00169	.50688	.05612	-.04175	-.00030	.00116	.00263	4.47784	5.42977	2.57399
4.000	25.634	-.00208	.68207	.05480	-.05600	-.00077	.00158	.00249	4.47784	5.42977	3.52591
4.000	30.764	-.00171	.86270	.05352	-.07690	-.00026	.00125	.00135	2.57399	5.42977	2.57399
4.000	36.914	-.00167	1.09454	.04958	-.09806	-.00022	.00157	.00006	2.57399	4.47784	2.57399
GRADIENT		.00000	.03583	-.00030	-.00315	.00000	.00004	-.00009	-.11921	-.11934	.00489

DATE 06 FEB 74

TABULATED SOURCE DATA LARC UPJT 1031

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MA-7,UPJT 1031,ROCKWELL PRR ORB. CONF. BVTNMD

(APH062) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XRRP = 12.9510 INCHES  
 LREF = 7.8628 INCHES YRRP = .0000 INCHES  
 BREF = 15.1132 INCHES ZRRP = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 103.000  
 RV/L = 3.000

## PARAMETRIC DATA

RUN NO. 46/ 0 RV/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.671	-.00040	.25048	.05837	-.03024	.00017	.00035	-.00032	16.85289	18.75675	7.33362
4.000	16.662	-.00046	.36771	.05742	-.03784	.00002	.00042	-.00039	14.94904	15.90096	8.28555
4.000	21.062	-.00027	.49994	.05690	-.04598	.00001	.00039	-.00025	12.09326	13.99711	8.28555
4.000	26.412	.00002	.68539	.05627	-.06007	.00003	.00064	-.00085	12.09326	13.99711	7.33362
4.000	31.717	.00062	.86776	.05436	-.06060	.00044	.00045	-.00129	11.14133	11.14133	8.28555
4.000	37.043	.00140	1.10783	.05177	-.10570	.00033	.00101	-.00287	10.18940	11.14133	8.28555
GRADIENT		.00007	.03525	-.00025	.00305	.00001	.00002	-.00010	-.25923	-.30039	.02142

MA-7,UPJT 1031,ROCKWELL PRR ORB. CONF. BVTNMD

(APH063) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XRRP = 12.9510 INCHES  
 LREF = 7.8628 INCHES YRRP = .0000 INCHES  
 BREF = 15.1132 INCHES ZRRP = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 199.000  
 RV/L = 1.000

## PARAMETRIC DATA

RUN NO. 50/ 0 RV/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.396	-.00112	.22767	.06232	-.01671	-.00099	.00041	.00148	5.42977	7.33362	2.57399
4.000	16.670	-.00096	.34501	.05151	-.02594	-.00119	.00099	.00025	5.42977	7.33362	3.52591
4.000	20.542	-.00075	.47453	.05132	-.03905	-.00142	.00145	-.00019	4.47784	5.42977	3.52591
4.000	25.735	-.00090	.65934	.05143	-.04781	-.00186	.00187	-.00043	4.47784	5.42977	2.57399
4.000	30.732	-.00069	.85461	.04974	-.06866	-.00095	.00097	-.00001	2.57399	5.42977	2.57399
4.000	35.736	-.00091	1.05540	.04630	-.09034	-.00067	.00127	-.00113	2.57399	5.42977	2.57399
GRADIENT		.00001	.03578	-.00023	.00306	.00001	.00003	-.00008	-.13965	-.06985	-.02484

DATE 06 FEB 74

TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BA-140

(APMD64) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XRRP = 12.9510 INCHES  
LREF = 7.6626 INCHES YRRP = .0000 INCHES  
BREF = 15.1152 INCHES ZRRP = 6.0000 INCHES  
SCALE = .0150

RUN NO. 51/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
MAON	12.364	-.00177	.21631	.04755	-.01067	-.00199	.00049	.00277	5.42977	8.28555	2.57399
4.000	16.512	-.00061	.33772	.04705	-.01899	-.00186	.00157	-.00128	5.42977	7.33562	2.57399
4.000	20.659	-.00095	.47442	.04562	-.02910	-.00213	.00188	-.00031	4.47784	6.38170	2.57399
4.000	25.867	-.00112	.65407	.04580	-.04267	-.00260	.00230	-.00051	3.52591	5.42977	2.57399
4.000	30.775	-.00212	.84844	.04341	-.06148	-.00174	.00091	.00269	2.57399	4.47784	2.57399
4.000	35.947	-.00154	1.06056	.04158	-.08956	-.00142	.00136	.00004	2.57399	4.47784	3.52591
GRADIENT		-.00002	.03592	-.00025	-.00313	.00002	.00071	-.00001	-.14355	-.17086	.02978

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BJTMC

(APMD65) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XRRP = 12.9510 INCHES  
LREF = 7.6626 INCHES YRRP = .0000 INCHES  
BREF = 15.1152 INCHES ZRRP = 6.0000 INCHES  
SCALE = .0150

RUN NO. 47/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
MAON	12.649	-.00136	.24121	.05171	-.02248	-.00081	.00027	.00047	16.85299	18.75675	8.28555
4.000	16.900	-.00263	.35851	.05081	-.02949	-.00131	.00033	.00128	15.90096	18.75675	8.28555
4.000	21.046	-.00169	.48703	.04951	-.03627	-.00189	.00134	-.00032	13.99711	14.94904	9.23748
4.000	26.479	-.00172	.67451	.04935	-.05078	-.00227	.00181	-.00118	10.18940	10.18940	9.23748
4.000	31.714	-.00242	.87675	.04766	-.07128	-.00142	.00119	-.00013	8.28555	10.18940	9.23748
4.000	37.078	-.00248	1.09869	.04540	-.09611	-.00118	.00111	-.00026	9.23748	11.14133	8.28555
GRADIENT		-.00003	.03520	-.00024	-.00299	-.00001	.00004	-.00005	-.37416	-.39295	.01409

MA-7, 1/2 MT 1031, ROCKWELL PRR ORB. CONF. BMTN40

(APR066) ( 06 FEB 74 )

## REFERENCE DATA

SRP = .7245 56.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BRP = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = 600.000  
 RN/L = 1.000

RUN NO. 52/ 0 RN/L = 1.00 GRADIENT/ INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.405	-.00250	.20535	.03734	.00329	-.00341	.00170	.00258	5.42977	7.33362	2.57399
4.000	16.513	-.00248	.32672	.03582	-.00498	-.00336	.00257	.00135	5.42977	6.38170	2.57399
4.000	20.524	-.00255	.45783	.03540	-.01408	-.00387	.00246	.00226	3.52591	5.42977	2.57399
4.000	25.682	-.00314	.64895	.03598	-.02981	-.00414	.00254	.00345	2.57399	5.42977	2.57399
4.000	30.768	-.00315	.84311	.03455	-.04866	-.00296	.00183	.00391	2.57399	4.47784	2.57399
4.000	35.909	-.00250	1.06125	.03182	-.07193	-.00312	.00210	.00112	2.57399	4.47784	2.57399
4.000		-.00002	.03650	-.00019	-.00318	.00002	-.00001	.00001	-.14114	-.11889	-.00000

GRADIENT

DATE 06 FEB 74

TABULATED SOURCE DATA LARC UPWT 1031

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MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BATN41

(APMD67) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LRF = 7.6626 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 PO-JET = .000  
RN/L = 3.000

RUN NO. 63/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.067	.00111	-.01352	.08676	-.00969	.00003	.00023	-.00083	103.55715	129.25918	51.20117
2.900	4.293	.00280	.11803	.08380	-.02747	.00015	.00015	-.00152	95.94174	110.22064	54.05695
2.900	6.565	.00313	.24460	.08095	-.04323	.00037	.00027	-.00171	80.71091	94.98981	49.29732
2.900	12.716	.00393	.36973	.07754	-.05750	.00038	.00026	-.00190	56.91273	81.66283	41.68190
2.900	17.013	.00317	.50754	.07438	-.07232	.00033	.00037	-.00172	41.68190	67.38393	35.97034
2.900	21.258	.00361	.65409	.07102	-.08637	.00050	.00061	-.00237	30.25877	54.05695	35.01841
GRADIENT		.00039	.03003	-.00068	-.00406	.00003	-.00002	-.00016	-1.73868	-4.34670	.65200

RUN NO. 65/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.213	-.00106	-.01988	.07979	-.01292	.00024	.00025	.00023	71.19164	84.51861	27.40299
2.900	4.097	.00038	.09132	.07695	-.02511	.00026	.00033	-.00064	70.23971	71.19164	28.35492
2.900	6.228	.00111	.20455	.07459	-.03551	.00039	.00043	-.00103	52.15310	58.61658	25.49914
2.900	12.572	.00190	.32622	.07162	-.04705	.00058	.00028	-.00106	36.92226	49.29732	21.69143
2.900	16.762	.00217	.45660	.06929	-.06057	.00059	.00042	-.00141	27.40299	41.68190	18.83565
2.900	21.018	.00383	.59787	.06632	-.07389	.00074	.00058	-.00264	19.78758	33.11456	17.88372
GRADIENT		.00033	.02580	-.00063	-.00283	.00000	.00002	-.00020	-2.22087	-3.09210	.22087

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN41 (AFMO68) ( 06 FEB 74 )

REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

PARAMETRIC DATA

BETA = .000 PO-JET = 151.000  
RN/L = 3.000

RUN NO. 66/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.990	-.206	-.00036	-.02136	.07923	-.01261	.00023	.00023	-.00011	70.23971	64.51861	27.40299
2.990	4.032	.00030	.06987	.07692	-.02532	.00025	.00028	-.00063	70.23971	71.19164	27.40299
2.990	8.219	.00127	.20460	.07461	-.03352	.00033	.00038	-.00105	51.20117	58.81658	22.64336
2.990	12.471	.00303	.32349	.07142	-.04652	.00054	.00035	-.00176	35.01841	48.34539	21.69143
2.990	16.732	.00245	.45630	.06884	-.06051	.00059	.00032	-.00141	24.54721	39.77804	17.88372
2.990	21.073	.00342	.59669	.06598	-.07372	.00073	.00050	-.00230	17.88372	31.21070	19.78758
GRADIENT		.00020	.03611	-.00054	-.02298	.00000	.00001	-.00012	-.00000	-3.12840	-.00000

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. BMTN41 (AFMO69) ( 06 FEB 74 )

REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8628 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

PARAMETRIC DATA

BETA = .000 PO-JET = 185.000  
RN/L = 3.000

RUN NO. 64/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
2.900	-.183	.00100	-.01490	.08636	-.00944	-.00008	.00028	-.00084	102.60523	129.25918	52.15310
2.900	4.097	.00272	.11394	.08392	-.02672	.00020	.00014	-.00148	95.94174	111.17257	53.10502
2.900	8.396	.00392	.23915	.08121	-.04266	.00032	.00020	-.00201	81.66283	94.98981	46.44153
2.900	12.656	.00447	.36812	.07733	-.05720	.00044	.00028	-.00219	56.91273	81.66283	41.68190
2.900	17.062	.00324	.51132	.07400	-.07260	.00048	.00038	-.00177	42.63383	66.43200	36.92226
2.900	21.360	.00325	.65798	.07070	-.08667	.00044	.00054	-.00210	30.25877	53.10502	36.92226
GRADIENT		.00040	.03008	-.00057	-.02404	.00007	-.00003	-.00015	-1.55689	-4.22584	.22241



DATE 06 FEB 74 TABULATED SOURCE DATA LARC UPJT 1031

(APM070) ( 06 FEB 74 )

NA-7,UPJT 1031,ROCKWELL PRR ORB. CONF. BUTN41

REFERENCE DATA

SREF = .7245 50.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = .000  
 RN/L = 1.000

PARAMETRIC DATA

RUN NO. 57/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.432	-.00173	.25046	.06319	-.02924	.00011	.00006	.00490	6.36445	6.36445	2.65289
4.000	16.911	-.00132	.37358	.06236	-.03763	.00036	.00021	.00398	7.41253	7.41253	2.65289
4.000	21.999	-.00143	.51268	.06280	-.04848	.00063	.00022	.00359	6.46060	7.41253	2.65289
4.000	25.662	-.00152	.66731	.05986	-.06269	.00064	.00044	.00323	5.50867	7.41253	2.65289
4.000	30.706	-.00129	.86704	.05796	-.08185	.00112	.00022	.00317	5.50867	6.46060	2.65289
4.000	35.922	-.00066	1.09723	.05422	-.10318	.00093	.00056	.00150	4.55675	5.50867	2.65289
GRADIENT		.00003	.03612	-.00037	-.00313	.00004	.00002	-.00012	-.15403	-.10442	.00000

(APM071) ( 06 FEB 74 )

NA-7,UPJT 1031,ROCKWELL PRR ORB. CONF. BUTN41

REFERENCE DATA

SREF = .7245 50.FT. XMRP = 12.9510 INCHES  
 LREF = 7.8828 INCHES YMRP = .0000 INCHES  
 BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = .000  
 RN/L = 3.000

PARAMETRIC DATA

RUN NO. 54/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.409	-.00197	.25837	.06089	-.03306	.00045	.00040	.00130	17.86372	19.78752	7.41253
4.000	16.916	-.00150	.38009	.05983	-.04087	.00063	.00051	.00081	15.97987	15.97987	7.41253
4.000	21.094	-.00150	.51144	.05904	-.04882	.00082	.00046	.00097	14.07602	15.02794	7.41253
4.000	26.440	-.00131	.70111	.05847	-.06358	.00072	.00059	.00035	10.26831	14.07602	7.41253
4.000	31.727	-.00070	.90513	.05645	-.08359	.00120	.00036	.00027	11.22024	14.07602	7.41253
4.000	37.042	.00020	1.12488	.05335	-.10942	.00116	.00061	-.00092	12.17216	11.22024	7.41253
GRADIENT		.00009	.03566	-.00028	-.00306	.00003	.00001	-.00008	-.26319	-.28436	.00000

NA-7,UPUT 1031,ROCKWELL PRR ORB. CONF. BATH41

REFERENCE DATA

SREF = .7245 58.47. XREF = 12.9510 INCHES  
 LREF = 7.8828 INCHES YREF = .0000 INCHES  
 BREF = 19.1152 INCHES ZREF = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 37.000  
 RV/L = 1.000

PARAMETRIC DATA

RUN NO. 58/ 0 RV/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.399	-.00177	.24455	.06171	-.02994	.00035	.00007	.00490	7.41253	7.41253	1.70096
4.000	16.499	-.00134	.36761	.06130	-.03666	.00036	.00020	.00393	7.41253	7.41253	2.63289
4.000	20.582	-.00145	.50710	.06157	-.04733	.00062	.00021	.00364	4.56675	7.41253	2.63289
4.000	25.730	-.00190	.69332	.06000	-.06183	.00064	.00045	.00318	5.50667	7.41253	2.63289
4.000	30.632	-.00067	.89232	.05771	-.06103	.00092	.00037	.00167	5.50667	6.46060	2.63289
4.000	35.867	-.00091	1.09756	.05363	-.10506	.00069	.00101	.00147	4.55675	6.46060	1.70096
GRADIENT		.00004	.03647	-.00032	-.00031	.00002	.00003	-.00015	-.11144	-.04704	-.00237

NA-7,UPUT 1031,ROCKWELL PRR ORB. CONF. BATH41

REFERENCE DATA

SREF = .7245 58.47. XREF = 12.9510 INCHES  
 LREF = 7.8828 INCHES YREF = .0000 INCHES  
 BREF = 19.1152 INCHES ZREF = 6.0000 INCHES  
 SCALE = .0150

BETA = .000 PO-JET = 100.000  
 RV/L = 1.000

PARAMETRIC DATA

RUN NO. 59/ 0 RV/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MAON	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.409	-.00177	.24452	.06163	-.02993	.00035	.00007	.00491	7.41253	7.41253	1.70096
4.000	16.499	-.00134	.36748	.06127	-.03665	.00036	.00020	.00393	6.46060	7.41253	1.70096
4.000	20.582	-.00157	.50882	.06094	-.04729	.00039	.00043	.00360	5.50667	7.41253	1.70096
4.000	25.673	-.00243	.69746	.05975	-.06073	.00005	.00193	-.00106	5.50667	7.41253	2.63289
4.000	30.761	-.00081	.88675	.05792	-.06186	.00025	.00136	.00021	5.50667	6.46060	1.70096
4.000	35.911	-.00089	1.09750	.05424	-.10524	.00030	.00214	-.00139	5.50667	6.46060	1.70096
GRADIENT		.00007	.03639	-.00030	-.00014	-.00001	.00009	-.00029	-.07190	-.04711	.00494



DATE 06 FEB 74

TABULATED SOURCE DATA LARC UPWT 1031

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NA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BNTM41

(APM074) ( 06 FEB 74 )

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 103.000  
RN/L = 3.000

## PARAMETRIC DATA

RUN NO. 55/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.682	-.00182	.28034	.06071	-.03345	.00045	.00033	.00128	17.88372	19.78758	7.41253
4.000	16.886	-.00192	.36014	.05951	-.04087	.00053	.00040	.00126	16.93180	16.93180	7.41253
4.000	21.077	-.00131	.51341	.05890	-.04918	.00064	.00053	.00049	14.07602	15.02794	7.41253
4.000	26.394	-.00131	.68923	.05839	-.06322	.00064	.00059	.00035	10.26831	15.02794	6.46060
4.000	31.705	-.00070	.90516	.05631	-.08358	.00120	.00036	.00027	11.22024	13.12409	7.41253
4.000	37.039	.00097	1.12297	.05334	-.10806	.00095	.00112	-.00168	12.17216	11.22724	7.41253
GRADIENT		.00010	.03553	-.00028	-.03303	.00003	.00002	-.00011	-.28160	-.31295	-.00473

## REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

BETA = .000 PO-JET = 199.000  
RN/L = 1.000

## PARAMETRIC DATA

NA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BNTM41

(APM075) ( 06 FEB 74 )

RUN NO. 60/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	COL	CYN	CY	PB1	PB2	PB3
4.000	12.409	-.00114	.24451	.06101	-.02991	-.00004	.00120	.00204	7.41253	7.41253	1.70096
4.000	16.499	-.00107	.36773	.06008	-.03663	-.00048	.00198	.00099	6.46060	7.41253	1.70096
4.000	20.562	-.00098	.50718	.06045	-.04735	-.00067	.00277	-.00077	4.55675	7.41253	1.70096
4.000	25.684	-.00089	.68767	.05958	-.06063	-.00132	.00358	-.00272	5.90867	7.41253	1.70096
4.000	30.772	-.00066	.88680	.05758	-.08189	-.00041	.00257	-.00129	5.90867	6.46060	1.70096
4.000	35.887	.00006	1.09728	.05375	-.10511	-.00013	.00271	-.00287	5.90867	5.90867	1.70096
GRADIENT		.00005	.03639	-.00028	-.03303	-.00000	.00006	-.00029	-.06445	-.07890	.00000

DATE 08 F\_3 74 TABULATED SOURCE DATA LARC UPWT 1031

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. B/IN41

(APM076) ( 08 FEB 74 )

PARAMETRIC DATA

BETA = .000 PO-JET = 326.000  
RN/L = 1.000

REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

RUN NO. 61/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CSL	CYN	CY	PB1	PB2	PB3
4.000	12.418	-.00066	.24475	.06026	-.02996	-.00133	.00376	-.00238	7.41233	6.46080	2.65289
4.000	16.519	-.00029	.36783	.05978	-.03673	-.00197	.00510	-.00486	7.41253	7.41253	2.65289
4.000	20.582	-.00049	.50752	.06034	-.04746	-.00220	.00534	-.00523	5.50867	7.41253	2.65289
4.000	25.632	.00014	.68758	.05970	-.06086	-.00214	.00549	-.00703	4.55675	7.41253	1.70096
4.000	30.780	-.00002	.88113	.05748	-.07896	-.00104	.00371	-.00416	4.55675	6.46080	1.70096
4.000	35.934	-.00022	1.09700	.05346	-.10318	-.00013	.00313	-.00284	4.55675	5.50867	1.70096
GRADIENT		.00002	.00636	-.00026	-.00308	.00006	-.00003	-.00000	-.14112	-.04974	-.05202

MA-7,UPWT 1031,ROCKWELL PRR ORB. CONF. B/IN41

(APM077) ( 08 FEB 74 )

PARAMETRIC DATA

BETA = .000 PO-JET = 559.000  
RN/L = 5.000

REFERENCE DATA

SREF = .7245 SQ.FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

RUN NO. 56/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CSL	CYN	CY	PB1	PB2	PB3
4.000	12.680	-.00152	.25796	.05966	-.03299	.00008	.00051	.00081	17.88372	19.78758	6.46080
4.000	16.893	-.00041	.37825	.05868	-.04113	-.00002	.00175	-.00161	16.93180	15.97987	6.46080
4.000	21.083	.00102	.51169	.05802	-.04949	-.00065	.00292	-.00437	14.07602	14.07602	6.46080
4.000	26.384	.00173	.69999	.05791	-.06331	-.00099	.00370	-.00396	11.22324	15.02794	6.46080
4.000	31.713	.00124	.90207	.05591	-.08318	-.00032	.00297	-.00459	12.17216	13.12409	6.46080
4.000	37.082	.00004	1.12142	.05336	-.10735	-.00012	.00292	-.00375	12.17216	11.22324	6.46080
GRADIENT		.00016	.00452	-.00024	-.00301	-.00002	.00009	-.00024	-.25996	-.28891	.00000

## DATE 08 FEB 74 TABULATED SOURCE DATA LARC UPWT 1031

(APM078) ( 08 FEB 74 )

MA-7, UPWT 1031, ROCKWELL PRR ORB. CONF. BUTN41

## PARAMETRIC DATA

DETA = .030 PO-JET = 600.000  
RN/L = 1.000

## REFERENCE DATA

SREP = .7245 SQ. FT. XMRP = 12.9510 INCHES  
LREF = 7.8828 INCHES YMRP = .0000 INCHES  
BREF = 15.1152 INCHES ZMRP = 6.0000 INCHES  
SCALE = .0150

RUN NO. 62/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	PB1	PB2	PB3
4.000	12.527	.00135	.25120	.05926	-.02930	-.00431	.00938	-.01414	6.46060	7.41253	2.65289
4.000	16.528	.00105	.36257	.05955	-.03582	-.00456	.00958	-.01368	6.46060	7.41253	2.65289
4.000	20.581	.00115	.50215	.06072	-.04462	-.00388	.00818	-.01252	5.50867	6.46060	2.65289
4.000	25.674	.00057	.68814	.05955	-.05907	-.00324	.00707	-.01005	4.55675	6.46060	2.65289
4.000	30.878	.00051	.89236	.05723	-.07924	-.00143	.00596	-.00710	5.50867	5.50867	2.65289
4.000	35.922	-.00022	1.09693	.05297	-.10314	-.00013	.00313	-.00284	4.55675	5.50867	2.65289
GRADIENT		-.00006	.03647	-.07025	-.00314	.00019	-.00028	.00048	-.07926	-.09194	.00000